IN THE UNITED STATES DISTRICT COURT

FOR THE WESTERN DISTRICT OF WISCONSIN

WILLIAM WHITFORD, et al.,	)	
	)	
Plaintiffs,	)	
	)	
-vs-	)	Case No. 15-CV-421-bbc
	)	
GERALD NICHOL, et al.,	)	
	)	
Defendants.	)	

VIDEOTAPED DEPOSITION OF

RONALD KEITH GADDIE, Ph.D.

TAKEN ON BEHALF OF THE PLAINTIFFS

IN OKLAHOMA CITY, OKLAHOMA

ON MARCH 9, 2016

REPORTED BY: SUSAN NARVAEZ, CSR

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S T I P U L A T I O N S

It is hereby stipulated and agreed by and between the parties hereto, through their respective attorneys, that the deposition of RONALD KEITH GADDIE, Ph.D., may be taken on behalf of the Plaintiffs on March 9, 2016, in Oklahoma City, Oklahoma, by Susan Narvaez, Certified Shorthand Reporter for the State of Oklahoma, pursuant to the Federal Rules of Civil Procedure, by notice and subpoena.

* * * * * *

THE VIDEOGRAPHER: We are on the record. Today's date is March 9, 2016, and time is 9:09 a.m. We are here to videotape the deposition of Ronald Keith Gaddie in the case styled Whitford versus Gerald Nichol, et al. Case Number 15-CV-421-bbc, filed in U.S. District Court in the Western District of Wisconsin.

We are at Dodson Court Reporting in Oklahoma City. My name is John Highfield with Dodson Court Reporting located in Oklahoma City, Oklahoma. Our court reporter is Susan Narvaez with Dodson Court Reporting.

Will our attorneys please introduce themselves for the record?

MR. POLAND: This is Doug Poland of Rathje & Woodward on behalf of the Plaintiffs.

MR. EARLE: Peter Earle of the law offices of Peter Earle on behalf of the Plaintiffs.

MR. KEENAN: Brian Keenan from the Wisconsin Department of Justice on behalf of the Defendants.

MR. GLIDEWELL: Jason Glidewell on behalf of Dr. Gaddie.

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RONALD KEITH GADDIE, Ph.D.
of lawful age, being first duly sworn, deposes and says in reply to the questions propounded as follows:
* * * * * * *
EXAMINATION
BY MR. POLAND:
Q. Good morning, Dr. Gaddie.
A. Good morning, Mr. Poland. How are you?
Q. I'm well. Thanks. And yourself?
A. Doing well.
Q. Good. Would you please state your full name and spell it for the court reporter?
A. Ronald Keith Gaddie, R-o-n-a-l-d, K-e-i-t-h, G-a-d-d-i-e.
Q. Dr. Gaddie, is it okay if I refer to you as Dr. Gaddie or would you prefer Professor Gaddie?
A. Whatever you're comfortable with, Counselor.
Q. Very good. Now, Dr. Gaddie, you have been deposed before, correct?
A. Yes.
Q. And several times in the past?

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A. Yes.
Q. Including in the Baldus versus Brennan case in 2012, correct?
A. Yes.
Q. So you're not a stranger to having your deposition taken, I assume?
A. No.
Q. All right. Let's just run through a couple of the basics so we get on common ground here. You understand that you are under oath today and you do need to testify truthfully?
A. Yes.
Q. Do you understand that your deposition may be played in court during the trial of this case, which is titled Whitford versus Nichol?
A. Yes.
Q. If you don't understand a question when I ask it, please let me know that and I would be happy to restate it for you so that you can understand it and answer it.
A. I understand.
Q. And I don't know exactly how long we'll go today, but if you do need a break at any time, please let me know. We won't break while a question is pending, but otherwise we

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can take a break for your convenience when you request one. Okay.
A. Very good. Thank you.
Q. For the sake of the court reporter and for the clarity of the record, we'll both need to try not to talk over one another. I know from previous experience that you're a little bit more deliberate in your answers than I am in my questions in terms of the speed. So please wait to answer a question until I finish it, and I'll do my very best not to talk over you until you're fully complete with your response.
A. Very good.
Q. Now, Dr. Gaddie, you're appearing today pursuant to a subpoena, correct?
A. That's correct.
(Exhibit No. 30 marked.)
Q. I'm going to ask the court reporter -- oh, she's already marked it as Exhibit Number 30. I'm going to hand a copy of that to you. Dr. Gaddie, have you seen Exhibit 30 before?
A. Yes.
Q. When did you see Exhibit Number 30?

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A. It was served on me sometime in February. I don't remember the exact date. I believe it was on a Sunday.
Q. Very well. Now, you have counsel representing you here today, correct?
A. Yes.
Q. And did you retain your counsel?
A. Yes.
Q. Are you paying for your counsel yourself?
A. Counsel is a long-time colleague and friend, and he is appearing here on my behalf.
Q. Very good. So there's no one else who is paying for your counsel's time today?
A. That is correct.
Q. Now, attached to the subpoena that you received in February is a rider or a document attachment. Exhibit "A" it's called. Do you see that?
A. Yes, I'm looking at that now.
Q. And you see that it asks you to produce certain designated materials in response to the subpoena, correct?
A. Yes.
Q. Now, did you in fact look for and

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produce documents in response to the subpoena?
A. I have exhaustively produced everything in my possession in response to the subpoena.
Q. Very good. So I'm going to start out by asking you where you looked for materials and then we'll talk about how they got produced and we'll mark that as an exhibit. So where did you look for materials in response to the subpoena?
A. I looked on all the computers in my possession and then examined my e-mails.
Q. How many computers do you have in your possession?
A. Oh, my goodness. Several. Several. Several laptops, desktop machine, notebooks, so on and so forth. So two primary computers that I use, though, two laptops.
Q. Do you still have the computers that you used when you participated as a consultant working with the Wisconsin state senate and assembly with Michael, Best & Friedrich in 2011?
A. No.
Q. I'm going to come back to that in just

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a second. Let me ask you another question first. Are you appearing here today in your capacity as a fact witness?
A. As a fact witness, yes.
Q. Have you been asked to provide any kind of expert opinions in this particular case, Whitford versus Nichol?
A. No.
Q. I think that we can agree, and we had a little colloquy about this before the deposition started. We are not seeking to take any discovery of you as an expert witness. You've not been tendered as an expert witness, and so this is strictly a fact deposition here today. I want to make that clear. Nonetheless, there are some questions we're going to have that arise out of the work that you did as an expert back in 2011. Okay? Just to make sure you understand that. I'm not going to ask you opinion types of questions, but I may ask you facts about the work that you did while you were an expert.
A. Yes.
Q. When did you lose possession or custody of the computers that you used in your

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role as a consultant with the Wisconsin legislative redistricting in 2011?
A. Not so much a loss of possession. University computers turn over over time. So the machine -- it's been four years since I did that work. And one of the machines that I used for that job was a former university machine, I believe, that actually had a metadata code on it CAS. When I change over computers I transmit any files that I have from computer to computer. I have a university -- I have a university IT guy that transfers files over. Sometimes all files don't migrate. I hope that they do. But I'm working entirely on an Apple Pro Book now, which is the second Pro Book that I've been using. I was using one back during the -- back during the Wisconsin redistricting as well. That one had its memory cleaned and was given to my daughter after the university turned possession over to me.
So what happens is, as these machines have failed, I've migrated on to new machines.
Q. Okay. And so I believe you did -- your consulting work that you performed was in 2011, correct?

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A. That is correct.
Q. And so we'll just separate that out from the work that you performed as a testifying expert on behalf of the government accountability board in late 2011. I'm sorry. Yeah, late 2011, 2012, correct?
A. Okay. Very good.
Q. Were you able to confirm whether all of the files that you had and the metadata from your work as a consultant on the Wisconsin redistricting in 2011 was migrated over to computers that you now have in your possession?
A. I don't know.
Q. Do you know when those computers that you used for the redistricting in Wisconsin in 2011, when those computers were decommissioned or used for other purposes?
A. I don't recall. I've had turn over of several machines in the last five years.
Q. Do you believe it was after the Baldus versus Brennan litigation was concluded?
A. I believe so, yes.
Q. So in terms of responding to the subpoena that was served on you in this case, you looked at the computers that are in your

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possession now, correct?
A. Yes.
Q. All right. Are there any other places where you looked for materials responsive to the subpoena?
A. No.
Q. Do you ever use any kind of cloud storage?
A. As a general rule, no.
Q. And do you know when I refer to cloud storage, I mean things like Drop Box or Box.com?
A. Yeah, I've started using Drop Box and Base Camp only in the last couple of years.
Q. And Drop Box I'm familiar with. You said Base Camp?
A. It's a Drop Box style file project managing system. I use it for my university work.
Q. Okay. Did you use Drop Box or Base Camp or any other types of cloud storage for the work -- in connection with the work that you did in 2011 on the Wisconsin redistricting?
A. No.
Q. Did you use any other kind of

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electronic media for storage of materials that were associated with the work that you did in 2011 as a consultant? For example, flash drives, CD-ROMs, DVDs, anything like that?
A. Nothing in my possession. Honestly, I'm trying to remember if we used any flash drives for the transmission and movement of data. I just don't recall. Everything I kept, I kept on the hard drive.
Q. And that was the hard drive of your computer?
A. Yes.
Q. What about paper files? We've talked a little bit about electronic materials. What about paper files? Did you look through your office at all, file cabinets, anything like that for any paper files you may have?
A. I don't have any paper files left from that re-map. In fact, the remarkable thing was I set aside a banker's box for that trial, and I think the only thing in there might have been my retention letter, and I don't even have that box anymore. I remember remarking on how empty it was when we got done with litigation because everything was electronic.

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Q. Do you remember what you did with anything that would have been in the banker's box when you were done with the litigation?
A. No.
Q. Do you have it with you anymore?
A. No.
Q. Now, you did produce documents or materials in response to the subpoena served on you in this case, correct?
A. Yes.
Q. And you produced those a week ago, on March 2, correct?
A. Yes, I did.
Q. Do you have with you what you produced a week ago on March 2?
A. (Witness indicates.)
Q. All right.
A. This flash drive.
Q. Flash drive. For the written record -- the video will pick that up. For the written record, it's what we call a flash drive, a USB drive, a thumb drive. It goes by various names, correct?
A. Correct.
Q. Now, Dr. Gaddie, if you would hand

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that to me, I'm going to have the court reporter mark this as Exhibit Number 31.
(Discussion off the record.)
MR. EARLE: For the transcript, where we attach exhibits to the transcript, when we have an electronic file like this, is this something we could produce onto a CD that we would have in a pocket in the back of the transcript?
MR. POLAND: I think we probably could.
(Exhibit No. 31 marked.)
Q. (By Mr. Poland) Dr. Gaddie, the court reporter -- we will mark this as Exhibit Number 31, but we're going to do some alterations of the exhibit sticker so it fits and it doesn't impede our access to the flash drive. But I'm going to hand you the flash drive.
And Exhibit Number 31, the green Lexar flash drive, does that contain all the materials that you produced in response to the subpoena?
A. Yes.
Q. And you can identify this flash drive in front of you as the one that you produced on

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March 2, correct?
A. Yes.
MR. POLAND: Now, we've also made two copies of the flash drive for counsel as well. And the caveat with the copies that we made is I can't guarantee that the metadata is identical to the metadata on the original copy that Dr. Gaddie provided. If we reach -- if anything comes up on this that raises questions about the metadata, we'll take a look at the original result that way, if that's fair enough for everyone.
Q. (By Mr. Poland) We're going to get into the substance of the flash drive in a short time here. I want to go through preliminary matters first.
Now, you understand that the subpoena that was served on you is in a case called Whitford versus Nichol and it's pending in the United States District Court for the Western District of Wisconsin?
A. Yes.
Q. All right. Great. And you were not engaged in any manner by the Defendants in the Whitford case to provide any kind of consulting

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services during the Whitford litigation, correct?
A. I have not been engaged in this litigation by anybody.
Q. And so as we've talked about before, your testimony today is as a fact witness, not an expert witness, correct?
A. That is correct.
Q. Dr. Gaddie, what did you do to prepare for your deposition today? And I'm referring to other than what you did to respond to the subpoena-produced documents.
A. I prepared the response to the subpoena-produced documents and I showed up today.
Q. All right. Did you talk to anybody about your deposition today in preparation for it?
A. No.
Q. You didn't talk to any -- to Mr. Keenan at all?
A. No.
Q. You didn't talk to any of the experts who have been retained by the Defendants?
A. No.

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Q. You didn't talk to any of the experts who have been retained by the Plaintiffs?
A. No.
Q. You didn't talk to me or to Mr. Earle, correct?
A. That is correct.
Q. Did you review any materials to prepare for your deposition other than looking for the documents that you produced on the flash drive that's Exhibit Number 31?
A. No.
Q. And you didn't meet with anybody other than -- well, strike that question.
You didn't meet with anybody to prepare for your deposition?
A. No.
Q. Did you meet with your counsel prior to the deposition?
A. We talked briefly and he asked me if I was prepared for my deposition and I said yes.
Q. Okay. Very good. I'm not going to ask you any more about that.
Have you ever spoken with Kevin St. John before?
A. I don't believe so. If I have, I

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don't recall that name.
Q. All right. Have you spoken with a Kevin St. John since July of last year?
A. Not that I can recall.
Q. No one has asked you to come to Wisconsin to testify in the Whitford case?
A. No.
Q. Correct? Do you know when the trial is scheduled to occur?
A. I have no idea.
Q. Now, you did testify as an expert in the Baldus versus Brennan case four years ago in 2012, correct?
A. That's correct.
Q. And your deposition was taken in that case in January of 2012, correct?
A. Yes.
Q. This is Exhibit Number 32.
(Exhibit No. 32 marked.)
Q. Dr. Gaddie, I'm going to hand you a copy of what the court reporter has marked as Exhibit Number 32 and ask you to take a look at it.
A. Yes.
Q. Can you identify Exhibit Number 32 for

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the record, please?
A. Yeah, this is my deposition from January 20, 2012, which I believe was taken in Milwaukee.
Q. And that's a transcript of the deposition, correct?
A. Yes.
Q. Did you have a chance to read your deposition transcript in the Baldus case?
A. Ever?
Q. Ever.
A. I'm sure I read it in preparation for trial four years ago.
Q. To the best of your recollection, was your deposition testimony that you gave in Exhibit Number 32 true and correct?
A. Yes.
Q. Are you aware of any testimony that you gave in your deposition in the Baldus case in Exhibit Number 32 that is not correct or is not accurate?
A. Based upon the testimony I gave at the time, no.
Q. Is there anything that you've become aware of that you testified to at your

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deposition since the time of the deposition that you don't believe is accurate any longer or true?
A. Not that I recall.
Q. Now, you also testified in the trial of the Baldus case in February of 2012, correct?
A. Yes.
(Exhibit No. 33 marked.)
THE VIDEOGRAPHER: Please make sure all devices are muted.
Q. (By Mr. Poland) Dr. Gaddie, the court reporter has handed you a copy of a document that's been marked as Exhibit Number 33. Do you have that in front of you?
A. Yes, I do.
Q. Can you identify Exhibit Number 33?
A. This appears to be the trial transcript of my testimony in Milwaukee from February of 2012.
Q. Now, in Exhibit Number 33 do you see that there is, on Page 556 of the transcript, there's an indication of where your examination appears in the transcript?
A. Yes.

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Q. And so you see that your examination begins on Page 558 and concludes on 576 of the transcript?
A. Yes.
Q. Have you ever had an opportunity to read your trial testimony that you gave in the Baldus case?
A. No.
Q. Never have?
A. I have never read my testimony in the Baldus case.
Q. Okay. To your recollection, was your testimony, trial testimony in the Baldus case, true and correct?
A. Yes.
Q. Have you ever become aware of any testimony that you provided in the Baldus trial that was not true or not correct?
A. No.
Q. Since the time that you testified at trial in the Baldus case in 2012, have you been engaged by the State of Wisconsin or any individual or entity associated with the State of Wisconsin to provide consulting services with respect to legislative redistricting?

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A. No.
Q. Have you kept in touch with Joe Handrick?
A. Yeah, socially.
Q. When was the last time you spoke with Mr. Handrick?
A. I spoke with Joe sometime last year. Periodic contact on social media, but we've not had any telephone conversations in some months.
Q. Have you spoken with Mr. Handrick since the time that the Whitford case was filed in July of 2015?
A. We probably have spoken, yes.
Q. Have you spoken about the Whitford case at all?
A. Only that it exists.
Q. Didn't discuss any of the allegations, the claims in the case?
A. No.
Q. Did Mr. Handrick tell you anything about his views or his impressions of the Whitford case?
A. No.
Q. Have you spoken with Adam Foltz since the conclusion of the Baldus trial in 2012?

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A. No.
Q. Have you spoken with Tad Ottman since the conclusion of the Baldus trial in 2012?
A. No. Mr. Ottman and I have run across each other on social media, but we've not spoken. To the extent we interact, it's about literature. He wrote a review of my novel.
Q. When did you publish a novel?
A. Actually probably about the same time -- it was just before this trial in 2011. 2010, 2011.
Q. I probably asked you about that at some point in your deposition.
Okay. So just social media then with Mr. Ottman?
A. Yes.
Q. Have you conversed with Mr. Ottman on social media about the Whitford case or the claims in the case at all?
A. No.
Q. Have you seen any postings by Mr. Ottman on social media about the Whitford case or the claims asserted in the Whitford case?
A. No.
Q. What about Jim Troupis? Have you

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spoken with Mr. Troupis since the conclusion of the Baldus trial in 2012?
A. No.
Q. What about Eric McLeod? Have you spoken with Eric McLeod since the conclusion of the Baldus trial in 2012?
A. No.
Q. Has anyone contacted you, whether by phone, by mail, social media, et cetera, to ask you about the Whitford case?
A. Other than being subpoenaed to appear here, no.
Q. Fair enough. Now, back to your deposition in Baldus. In Baldus you produced a flash drive with materials that were responsive to the subpoena and other discovery requests that were served in that case, correct?
A. Correct.
Q. And we have one of the flash drives that you produced in the Baldus litigation and we're going to mark it as an exhibit here because we are going to look at some files on it. So let's have it marked as Exhibit Number 34.
(Exhibit No. 34 marked.)

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Q. Dr. Gaddie, for the record I'm handing you a copy of what was marked in the Whitford case as Exhibit Number 34. This was Number 57 to your deposition in the Baldus case.
A. Yes.
Q. I also have copies of the flash drive for counsel. These, I believe, do preserve all the metadata from that flash drive.
Now, we are going to get into looking at some of the flash drives. So do you want to take a break here for just a minute and set it up?
A. Sure.
Q. Can we do that?
THE VIDEOGRAPHER: Going off the record. The time is 9:33 a.m.
(Recess.)
THE VIDEOGRAPHER: We are back on the record. The time is 9:41 a.m.
Q. (By Mr. Poland) Now, Dr. Gaddie, during the break we set up a computer here, a Macbook Air and we put into the USB ports on the Macbook Air two different exhibits. One is the flash drive that you produced to us in the Whitford case, which is, I believe, Exhibit

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Number 31.
A. Okay.
MR. EARLE: Oh, in the Whitford case?
MR. POLAND: Yes.
Q. (By Mr. Poland) And we also put into one of the other USB ports a flash drive that you produced in the Baldus case, which is Exhibit Number 34?
A. Yes.
Q. And so you have those both -- those are both in the computer in front of you there?
A. Yes, I see them.
Q. And can you confirm that the flash drive that has been marked as Exhibit Number 34 is in fact a copy of the Baldus Deposition Exhibit 57, the flash drive you produced in that case?
A. I can assume so. It's been four years. But looking at the -- is this the content in that drive over here? This looks like the content that would have been on that drive, yes.
Q. Now, comparing the content of the two flash drives that you produced, the one in the Baldus case and the one in this case, there's a

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difference in the number of files on each of those flash drives, correct?
A. Yes, it appears so.
Q. All right. And can you see how many files were on the Baldus flash drive, which is Exhibit Number 34?
A. I can't tell exactly how many. There are many. I can't tell you how many, but there are many.
Q. And there are fewer on the flash drive that you produced in this case, the Whitford case, correct?
A. Give me just a moment and let me examine. Yes.
Q. Can you explain why there are fewer files on the flash drive that you produced in this action, the Whitford action, than in the Baldus case?
A. I would assume -- again, in this case I produced all the files I had in my possession. So these files that I didn't -- the discrepancy in the files produced has to do with migration from machine to machine. I just don't have those files in my possession anymore.

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Q. Now, we also noticed as we looked at what was on the flash drive that you produced in Baldus and the flash drive that you produced in the Whitford case that there are several files that you produced in the Whitford case that were not produced in the Baldus case that had to do with legislative redistricting. Were you aware of that?
A. No.
Q. Let's talk about each one of those.
A. Okay.
Q. All right. So what I'm going to ask you to do is to pull up the directory with the flash drive that you produced in the Whitford case. All right? In this case. And that should be Exhibit Number 34. That's the green flash drive. And do you have that up in front of you?
A. Yes.
Q. All right. Now, the first one I want to ask you about is Wisconsin election data. So that's Wisconsin and then there's an underscore, an empty space, election, and then underscore, empty space, election, and then underscore, empty space and then data.xlsx.

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MR. EARLE: It disappeared. Could you repeat the name of that?
MR. POLAND: Sure. It's Wisconsin_election_data.xlsx. It's a 10.7 megabyte file.
A. Yes.
Q. (By Mr. Poland) Do you see that?
A. Yes.
Q. All right. Do you know, is there a way of telling from the metadata that you have on the flash drive when that document was created?
A. It was created on -- there is a way to identify that. The creation date is April 15, 2011.
Q. And that is while you were working as a consultant on the Wisconsin legislative redistricting, correct?
A. Yes.
Q. All right. Now, as I mentioned, we looked at the Baldus flash drive and could not find it among the materials that were produced. And so I'll make that representation.
A. Yes.
Q. Do you know why that document would

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not have been produced in the Baldus litigation?
A. I have no idea.
Q. When you produced materials in the Baldus litigation and you put them onto the flash drive that's now Exhibit Number 34, did you do that yourself?
A. Honestly, I don't remember. I pulled -- there was so much data moving around. Any data that I produced, any documents I produced, analysis I generated that would have been on my machines I turned over at the time of the litigation through counsel.
Q. So at the time you were responding to the subpoena in the Baldus case in 2012, any data, documents, whatever materials you had that were responsive you gave to counsel for the Defendants at that time, is that correct?
A. Yes.
Q. And then counsel -- did counsel actually create the flash drive that was provided to the Plaintiffs in that case?
A. I would assume so.
Q. You did not personally create that flash drive, is that correct?

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A. I don't believe so, no.
Q. Did you do anything to double check to see whether all of the materials that you gave to the counsel for the Defendants in the Baldus case was actually included on the flash drive that is marked as Exhibit Number 34 in this case?
A. No.
Q. Did you have any discussions with the counsel in the Baldus case about materials that should or should not be produced?
A. No.
Q. Just gave what you had to counsel and you let them make those decisions, is that correct?
A. I gave what I had to counsel, yes.
Q. All right. I'm going to ask you to take a look at another file now that is on the flash drive you produced to us last week. And this one is Wisconsin_ 1.xlsx.
You're there? Okay. Sorry. Is there a way of telling when that file was created, Wisconsin_ 1.xlsx?
A. Yes. The metadata on the screen indicates April 14, 2011.

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Q. And again, no way -- strike that question.
Do you know why that particular file was not produced in the Baldus case?
A. No.
Q. All right. I would like you to take another look at another one. It's directly below. It's Wisconsin_2010_1.sav. Do you see that document?
A. Yes.
Q. Do you know when that was created?
A. April 19, 2011.
Q. Do you know why that document was not produced in the Baldus case?
A. No.
Q. Now, I notice that that has a file extension of .sav. Do you see that?
A. Yes.
Q. Do you know what .sav means?
A. Yeah. And sav file is a database file extension that's used in SPSS, statistical package for the social sciences.
Q. Are these, the three files that we've looked at so far, are these files that you created?

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A. I would have created this last file, yes.
Q. The .sav file?
A. Yes.
Q. What about the xlsx files that we looked at before?
A. I would have to look in them to be sure, but these would probably be -- these would look like files that I would have created, yes.
Q. And we'll take a little bit of a deeper look at that in a little while.
A. Right. Yes.
Q. I just want to kind of run through what we have now.
A. Right.
Q. All right. The next one I would like you to take a look at is Tad_1_05272011xlsx.
A. Yes.
MR. EARLE: Could you read that again for me?
MR. POLAND: Sure. It's Tad underscore -- actually the underscore is actually a space underscore. So Tad_1_05272011.xlsx.

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Q. (By Mr. Poland) And you're there?
A. Yes.
Q. All right. When was that file created?
A. May 27, 2011.
Q. Can you tell from the metadata who created that?
A. No, not from what I'm looking at now.
Q. All right. Do you know whether just looking at the file name whether it's a file that you believe you created?
A. I don't know if I created it. It's possible I did. This dating device is one that I use from period to period, from time to time. So it's possible I did. I just don't know. I don't recall.
Q. The naming convention that's on the file, is that what you're referring to?
A. I've used naming conventions like this in the past and do currently, yes.
Q. If you were to open that file would it give you a better idea of whether you created it, do you think?
A. Yeah, because I'm not sure what's in it.

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Q. All right. Let's go ahead and open it up then.
A. Yes, that would be a file that I created.
Q. All right. Now, I notice if you actually go to the menu, I think it's the edit menu, and you open up properties --
A. Uh-huh.
Q. -- and if you click on the -- can you do that or no?
MR. EARLE: I can -- go off the record?
MR. POLAND: That's fine. We can go off the record.
THE VIDEOGRAPHER: Going off the record. The time is 9:53 a.m.
(Discussion off the record.)
THE VIDEOGRAPHER: We're back on the record. The time is 9:53 a.m.
Q. (By Mr. Poland) So Dr. Gaddie, I understand that with the computer you're working with now you can't actually access some of the properties of the file. But we looked here in the break, and when I look at the properties of the Tad_105272011 file we were

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looking at, I see under statistics that it says last saved by CAS build. So that's C-A-S b-u-i-l-d.
A. Yes.
Q. And you saw that on my computer?
A. Right.
Q. Can you tell me what CAS build is?
A. CAS build was an old -- it's an old Dell laptop that I was working on at the time that I used for data analysis.
Q. And we're going to look at a number of spreadsheets today. Whenever we see a document that was either created by or modified by CAS build, that would indicate that it came from your Dell laptop?
A. That's correct.
Q. Do you recall creating either this specific spreadsheet, this Tad_1 and the rest of the name, spreadsheet?
A. Yes.
Q. Why did you create this particular spreadsheet?
A. This spreadsheet -- give me a minute. It's been awhile since we played with these data.

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Q. Sure.
A. This spreadsheet is a -- can I scroll through for a moment? Let me review something here.
This spreadsheet was created to estimate a partisan performance score for proposed districts in the Wisconsin assembly plan based upon a variety of different scenarios, simple scenarios. And that is why it was created. It is not the only spreadsheet of this sort.
Q. Who asked you to create this spreadsheet, this particular spreadsheet?
A. These were created -- I had agreed with Joe Handrick to provide these types of spreadsheets to Adam Foltz, to himself and Adam Foltz and Tad Ottman, for the legislature in the drafting process. So one thing we do, they would create a map, then there would be part -- there's electoral history data attached to it. Those data were used to generate spreadsheets of this sort that indicated how a district would perform on a partisan measure under different scenarios.
Q. So this particular one that was

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created that has Tad -- and that indicates Tad Ottman, is that correct?
A. I would assume so, yes.
Q. And Mr. Ottman was a legislative aide for the Wisconsin state senate in 2011, is that correct?
A. I believe so, yes.
Q. So does this pertain specifically to the senate districts in Wisconsin?
A. Well, if we look at this first set, these were assembly districts. But when you're creating an assembly district, it necessarily pertains to the senate districts in Wisconsin because senate districts are pods of three assembly districts. So you can't draw one without the other.
Q. Do you know why they asked you to create this kind of a spreadsheet?
A. Well, what happened is when this redistricting started we talked about the types of measures that mapmakers need to have available to them. And I had been involved in the litigation phase in 2002 where among the various items we looked at in the redistricting process was a partisan check, to look and see

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-- to check the partisanship of districts.
Q. So I'm going to stop you there just a second because some of the judges -- we are in front -- we'll be in front of a three-judge federal panel and some of the judges might not be familiar with the legislative redistricting and the way this goes.
A. Okay.
Q. Judge Crabb has presided over a redistricting case before, but the other judges may not have.
A. Okay.
Q. So there are some terms that we might need to go back and explain in a little bit more detail.
A. Right. Okay. When in litigation one of the concerns that will arise is whether or not too heavy of a partisan thumb has been placed on the crafting of a map by the judiciary in crafting a map. And when we litigated in Wisconsin in 2011 and 2012, 2012, one of the items we debated about and discussed in court was how you measure the weight of the partisan thumb -- the weight of the partisan thumb that was put on the map because different

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map proposals were put forward by different litigants in that case. And one of the things that was done was a presentation of partisanship, partisan performance, how fair or how neutral or how biased was a map.
Q. And this was in 2002?
A. It was back in 2002, spring of 2002.
Q. Previous phase?
A. Right. Yeah. And one of the things we took note of in that case, and this will be borne out in different documentation that's been produced, is that -- well, Judge Easterbrook in particular had a particular fondness for regression driven model of partisanship.
There are basically two ways you can measure or you can estimate partisan change when you redistrict. One is to use what's called a reconstituted election technique where we take either one or an index with several statewide elections, exogenous elections, which are elections that occur outside a district. Right? Higher levels of office. And we attempt to get a sense of a partisan average from that.

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Or what you can do is you can take the actual election results, okay, the actual outcomes of previous elections, you turn those into a dependent variable, an outcome of interest, and then you regress using linear regression those results onto these larger statewide measures.
The other thing you do is you attempt to take into account whether or not there's an incumbent running so that you can account for the incumbency impact. Again, it's been four years since I did this. But what we did is I had proposed to the map drawers that if they wanted to present a best estimate of partisan impact so the lawmakers can understand the consequence of different maps, that a regression driven technique would be the best approach. So I set about building a regression equation using data that should have been produced to generate estimates of partisanship, partisan behavior in those districts for different district proposals.
So what this -- what this spreadsheet is, is the consequence of applying one of those models. If it is what I think it is, it's the

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consequence of applying one of those models to a map generated by a map maker where what we know is, we know the statewide election results, and we then put those data for each district into the regression equation and that gives us an estimated vote value for each district. And that's what's reported here, assuming no incumbent.
If we look at the different columns it will say all 40, all 41, all 42. That's based upon moving the vote share for one party or the other up or down by one percentage point increments statewide and then showing the impacts across the districts.
Q. So was part of your engagement then in 2011 to act as a consultant to build this regression model?
A. Yeah, my job was to devise measures and consult with them about measures, and not simply partisanship measures, measures of compactness. Other measures, the integrity of counties, the integrity of city boundaries, the so-called good government principles of redistricting.
Q. I think we call them traditional

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redistricting?
A. Traditional redistricting criteria.
And also in particular where I actually spent most of my time was trying to disentangle the performance of the majority/minority districts in Milwaukee County. And in particular, this particular problem which we talked about extensively last time of how to craft a Latino majority senate district and Latino majority assembly districts from Milwaukee County south of the crosstown connector.
Q. But a significant part of your work that you were retained to do and that you did perform in 2011 had to do with the -- with building a regression model to be able to test the partisan makeup and performance of districts as they might be configured in different ways, correct?
A. Yes, that's correct.
Q. Now, we didn't see in any of the materials that were produced any actual regression model equation. Was there one that was produced?
A. I produced everything I had in my possession. I can -- I don't have it. It's

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entirely possible that I generated it and I lost the file or didn't save the file. I can walk you through the specific inputs of it in order to reconstitute it.
Q. Sure. Yeah, that would be helpful. I might have to stop you along the way because I might not understand very well.
A. Well, that's okay.
Q. But we'll take it step by step.
A. Okay. What we're trying to do when you compute an equation like this -- and actually Ken Mayer did this in 2012 in developing his partisan baseline measure. And I basically replicated the model.
Q. This is one of those points where I need to stop you because you used the term partisan baseline measure. Can you explain what partisan baseline measure is?
A. Okay. Well, partisan baseline measure would be the measure of partisanship for a district, the measure of -- the level of party strength. So --
Q. Not with respect to any particular election?
A. No. No. Well, remember, when we

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redistrict we're trying to understand what the near present and the near future might look like. And subsequent elections are only as -- the use of this kind of analysis to understand subsequent elections are only as good as the willingness of the electorate to behave the way they did in past elections. So things change.
So in regression analysis you have a dependent variable and you have independent variable. So the dependent variable is the outcome of interest. Okay? So if you think about it in terms of an algebra equation, y equals m x plus v, right? Where y is the result, m is the constant, x is an independent variable subject to change and v is the slope coefficient, right? So old algebra, right? Y equals m x plus v.
Q. I'm going to have to take your word for that.
A. That's all right. That's all right. So what you do is you load up all the data you can on election outcomes. Okay? And so you get -- you start with the state legislative election outcome for a particular legislative seat for the senate or for the assembly. And I

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can't remember if I did this analysis using precinct level data or district level data. The outcomes are produced at the district level. I would have to go back and review the content if it's still around. You will want to ascertain this.
But ideally what you do is you work with the highest resolution data you have, which would be a VTD or precinct level data.
Q. The smallest population?
A. The smallest geographic unit, yeah. That gives you the biggest end.
Q. Is it the smallest geographic or is it the smallest on a population basis that you're looking at?
A. What are the smallest units that electorates have been divided into that we can know what their vote cast was. Okay? So more observations is better than fewer. Okay? So precincts are better than counties, for example. Precincts are better than districts. So VTD data.
And what you do is you look at the -- so you've got this outcome, vote for Democrat for assembly, and you load that up for the

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whole state for every observation you have. And then the next question you ask is, was there an incumbent running from one party or the other. You load that data up. Okay. And that's just indicated by a one or a zero. And that's one of your explanatory variables.

Incumbents have an advantage in running for reelection. So presumably if a Democratic incumbent is running they probably do about nine points better than if the seat is open. So if we had incumbents running we want to net out the incumbency effect because that's going to create a bias in understanding how a district is actually going to perform.

Then what you do is you need to have some other indicators of partisanship, past partisan performance. So you look at past elections, elections for governor or secretary of state, other statewide elected offices. Now, of course, these are all going to have some biases introduced by whether or not an incumbent is running.

But what you expect to see is that when Democrats run strong statewide, you expect them to run a strong down ticket. Okay? So

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you would expect there would be some relationship. So what we attempt to do is account for the amount of change in the assembly vote that arises from -- let's say if there's a one point change in the Governor's vote, what is the proportional change in the vote for assembly. If there's a one point change in the attorney general vote, is there a one point change for secretary of state and so on and so forth.

So what you try and do is you try and -- just try and get the best fit you can on the date. It doesn't mind you which election is more or less important. You're just trying to get a really good fit on the data so there's not a lot of error in guessing the way a district will perform. Okay? In guessing the outcome of interest.

And that gives you an equation that's going to have some numbers associated with it. It will be a thing called a constant or an intercept, which is, if you hold the value of everything else to zero, this is the expected vote for one party or the other. And then you can -- you'll have a set of slope coefficients

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that indicate to you, okay, yeah, this is the -- this is how much we would expect the change for -- the vote for assembly to change if we increase the vote for governor by one point, for example. You know, any grad student who's had an introductory methods class can run this stuff these days. It's pretty straightforward.

So again, it's been five years since I ran these equations, but the equations should look something like that.

Q. You mentioned that Dr. Mayer had done -- Ken Mayer had done the same thing?

A. In 2002, yes. In fact, one of the things up to that point in time is that there had always been a preference for reconstituted elections when we went to court. You just look at the change in the governor's vote from district to district before and after redistricting and call it done. Right?

Judge Easterbrook was very impressed with Ken's use of the regression models. And my thinking was, well, if we have to talk about partisanship, let's just get it right and save everybody some time arguing over it and let's just measure it best way as possible, every way

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possible and in the manner that the court has a preference for.

Q. Is the approach that you used in 2011 is that similar to what Ken Mayer had used in 2002 that Judge Easterbrook was impressed with?

A. Yeah. I can't promise it was the same, but it was certainly very similar, yes.

Q. Did you ever see Dr. Mayer's equation that he used to build his regression model?

A. Well, I mean, it was produced in his documents in 2002, so it's an easy thing to remember, which is you regress the legislative votes on to past elections.

Q. So is there actually -- would there be some kind of a formula that's used then that you would run everything through to do this?

A. Well, the formula -- there's a formula that's the product of the statistical analysis and then there's a formula that you -- formula that arises from that that's used to generate the partisanship measures. The question is, and I'm sure we're going to look, the question is if I were doing it now, I would just generate a macro that programs it in and put in the information and have it generate. I can't

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recall if I did it that way or not. But that would be one approach to doing it.
Q. Okay. So under what we're seeing then in the spreadsheet that we started out looking at, the Tad_1 --
A. Yes.
Q. -- _05252011, that is a measure of the partisanship with the current -- with the configuration that was put through your regression model, is that correct?
A. Yeah. Counsel, I'm going to ask you to repeat the question because I was a little distracted.
Q. That's fine. I'm going to ask the court reporter to read it back.
(Record read by reporter.)
A. I believe so, yes. And so, yes.
Q. And so how do you tell, just looking at this file on the screen, this Tad_1052 and so forth on the file, how do you tell what the measure of partisanship is by looking at this spreadsheet?
A. Okay. It's pretty straightforward. The values are bounded from zero to one, and these are proportions of the vote. So if we

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were to express them in percentages, for example, if we were to look at Row 1 and look at Column K. Okay? So it's the -- and there's a 0.5122. That would be 52.12%.
Q. 51.2%?
A. 52 -- oh, yeah, I'm sorry. 51 -- it would be 51.22%, yes.
Q. Okay.
A. And then if you look -- if we were to -- that is it if this was generated from the regression equation. If it were generated from an average of reconstituted elections, it would still be the same thing. It would be the average of the statewide vote. But assuming this is the product of the regression equation, the regression would have estimated a vote value based upon a level of strength for one party or the other in the state, and the expected vote in that district would be 51.22%.
Q. And do you know which particular party this is measuring?
A. Immediately offhand, no, because, like I said, it's been four years since I've looked at this. I would have to -- if I knew what a particular district was, my guess is that it's

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either a Democrat or a Republican two-party performance measure. I just -- I can't recall which. I can't recall which way we scaled the positive and the negative.
Q. Do you remember when you actually built your regression model in 2011, created it?
A. No. I may have -- I don't recall doing any data analysis on this case before April 15. It may have been as early as that weekend. It may have been later. Probably in April.
Q. All right.
A. Yeah.
Q. It certainly would have been before we -- before this spreadsheet was created that we have up on the screen right now, correct?
A. Yes.
Q. After you built your regression model, did the consultants that you were working with or the consultant, Joe Handrick, and then the legislative aides, Tad Ottman and Adam Foltz, did they have access to that regression model as well?
A. I would have provided it to them. I'm

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trying to recall if I gave them the equation to work off of or if I generated estimates off of my computer. If I generated estimates off of my computer, it should be in the documentation that's been produced.
Q. In other words, in that case you would have built the regression model, they would have given you certain map configurations, you would have run your regression, you would have found what the partisan bias would have been and then reported that back to them?
A. I would have run the data through and produced a document like this, yes.
Q. And I believe you testified back in 2011 you didn't actually draw any of the configurations of the districts, correct?
A. That is correct.
Q. That was all done by Tad Ottman, Adam Foltz and Joe Handrick?
A. That is correct.
Q. Now, once you've run a particular configuration of districts through your regression model and you've calculated what the partisan bias is one way or the other, Republican or Democrat, that provides feedback

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on the partisan makeup of that district, correct, as projected?
A. Yes. Let me clarify, though. I want to make sure that you have the completely correct understanding of the process. There's one body of data of elections from the past decade. Okay? So we run the regression equation on those data and that gives us a single equation to estimate the partisan performance of a constituency. Okay? And then what you do is you're able to take individual districts as crafted by the map maker which will have data on the elect -- the reconstituted elections, the statewide elections that were part of the previous regression equation. Okay? So we create a regression equation, it creates a set of slope coefficients that are associated with each predictor election that goes into estimating the vote performance.
What you then do for every district is you say, well, in this reconstituted district the gubernatorial vote is this, the secretary of state vote is this, attorney general vote is this. You load those into the equation and

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that generates out the product.
Q. All right. And so the product being the percentage likelihood that one party or the other would prevail in that district, correct?
A. The estimated vote share.
Q. The estimated vote share. Okay.
A. Yeah. Percentage likelihood is a different thing, which is the odds of winning. Okay? This is just a measure of what the partisan vote ought to look like, yeah.
Q. Okay. And based on what that output is, you could reconfigure the district and try to get a higher vote share for one party or the other or you could try to reconfigure it and get a lower vote share for one party or the other, correct?
A. Yes.
THE WITNESS: Doug, 30 seconds. I just need to run and get a glass of water real quick. I've got to do my Marco Rubio thing real quick. I'll be right back.
THE VIDEOGRAPHER: Going off the record, the time is 10:17 a.m.
(Recess.)
THE VIDEOGRAPHER: We are back on the

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record. The time is 10:22 a.m.
Q. (By Mr. Poland) Dr. Gaddie, before we broke we were looking at a number of files that, at least based upon my review, I thought were on the flash drive that you provided for us a week ago today in this case but were not on what was marked as Baldus Exhibit 57. That's the flash drive you produced in 2012. Mr. Keenan has informed me that he believes some of those files actually might have been on the Baldus flash drive. So we're going to go through a few more of these and if we have to go back and correct that record, we will.
A. Very good. Very good.
Q. The next file that I wanted to ask you about in the flash drive that you produced in the Whitford case is Tad1.sav.
A. Right.
Q. Are you there?
A. Yes.
Q. What is Tad1.sav?
A. This is an SPSS data file of the sort that I described earlier.
Q. Do you know why the naming convention was used Tad1?

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A. I assume this would be -- there's no assuming. This would be a file that was generated from data related to a map that would have been crafted by Mr. Ottman.
Q. All right. Was Mr. Ottman crafting maps?
A. Well, by "crafting," I mean Mr. Ottman was one of the people drawing maps at the time. So this would be a map that was rendered by him, yes.
Q. Do you know, did Mr. Ottman have your regression model? Was he running configurations of districts through your regression model?
A. I don't recall again if I have -- again, I don't recall. I provided information as is -- this is a very dynamic process. Honestly, I can't recall if I gave it to him or not. Anything I was asked to provide, I provided. I imagine, given the existence of this file, what happened is I got a configuration of the map that indicated the district level, the vote performance for the districts across the exogenous elections I described and then generated the estimates of

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partisanship off of it. And I imagine that's what this file does.
Q. Can you see again from the metadata that you've got available to you the data of Tad1.sav?
A. Yeah, May 27, 2011.
Q. What about Mr. Foltz? Did Mr. Foltz also provide configurations, various configurations of districts to you and have you run them through your regression model as well?
A. I'm trying to recall if he did or not. I mean, Mr. Foltz was another mapmaker that was in the room. He may have, but I don't recall. If he had and I generated analysis, it should be here.
Q. And then what about Mr. Handrick? Did Mr. Handrick also participate in drawing the maps and looking at outputs from your regression model?
A. Yes.
Q. Did Mr. Handrick have any input into the regression model that you created?
A. No.
Q. That was something you did entirely on your own?

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A. Yes.
Q. Did either Mr. Ottman, Mr. Foltz or Mr. Handrick ever, in your presence, apply the regression model or use the regression model?
A. I don't recall. Well, what do you mean by "use?"
Q. Did they ever actually perform the mechanics of doing whatever you need to do to enter the data into the model and then generating an output?
A. Not in my presence.
Q. Do you know if they ever did it outside your presence?
A. I don't know.
Q. This is probably a good place to ask you just about your hands-on work with the legislative aides and then Mr. Handrick in 2011.
A. Yes.
Q. We did go through this in your deposition back then, but I would like to do that for the purpose of this case as well.
A. Sure.
Q. When were you retained to do the legislative redistricting work, Dr. Gaddie, not

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your expert work?
A. I was contacted about the redistricting work initially in -- sometime in February, I think, of 2011, as I recall. I had had an informal contact from a Jim Troupis who had been counsel in the previous re-map. And then at some point in time Eric McLeod, who had also been involved in the previous re-map, transmitted me a retention letter and I think there was correspondence to this respect in my e-mails. And I believe my first actual engagement with the data probably would have been in April. Probably would have been in Madison.
MR. POLAND: Let's go ahead and mark this as an exhibit. What number are we up to now?
THE REPORTER: 35.
(Exhibit No. 35 marked.)
Q. (By Mr. Poland) Dr. Gaddie, the court reporter has handed you a document and you're going to see that it's got two different exhibit stickers on it.
A. Yes.
Q. One is Exhibit 35, and it's marked in

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the Whitford case as Exhibit 35. It was also marked as Exhibit Number 66 in your deposition in 2012. Do you see that?
A. Yes.
MR. KEENAN: Can I note that you gave him one with highlighting on it?
MR. POLAND: I gave him the wrong one. I'm sorry. That's my initials.
MR. EARLE: You got to see the keys to world peace.
MR. POLAND: Yeah, highlighted. If highlighting is the key to world peace, then --
THE WITNESS: Well, the thing is, as I tell my students, if the whole thing is highlighted, you're not doing yourself any good.
All right. Counsel, I'm sorry.
MR. POLAND: I'm sorry for the confusion. That's why you were asking me the question. Thank you.
MR. EARLE: I'll be a little more assertive next time.
MR. POLAND: Please do.
Q. (By Mr. Poland) Dr. Gaddie, do you have Exhibit Number 35 in front of you?

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A. Yes, I do.
Q. Can you identify Exhibit 35 for the record, please?
A. This is a retention letter which was sent to me by Eric McLeod on April 11 of 2011.
Q. And if you turn to the third page of Exhibit Number 35.
A. Yes.
Q. Is that your signature?
A. Yes, it is.
Q. And do you see it's filled in this 11th day of April 2011? Do you see that?
A. Yes.
Q. Do you recall where you signed Exhibit Number 35?
A. No.
Q. Do you know whether you might have been present in Madison on that day?
A. I don't know. I was in Madison three or four -- I was in Madison three days later. I don't know if I was in Madison -- April 11 would have been a Monday or a Tuesday. A Monday or a Tuesday. I don't believe I was in Madison when I signed this. So this may have been a facsimile transmission. It may have

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been an electronic transmission. I don't recall. But I did sign this the date that I got it and then returned it.
Q. If your deposition testimony in 2012 was that you signed this in Madison, would you think your memory was better at that time than it is now?
A. My memory was better at that time than it is now. So it's possible I was in Madison. I just don't recall.
Q. Let me ask you about the number of times that you were in Madison for the purpose of your consulting work --
A. Right.
Q. -- with legislative redistricting in 2011. How many times were you actually physically present in Madison?
A. At least two, possibly three during the spring and summer of 2011. Precisely, I can't recall. In producing e-mail there are travel arrangement records that appear in there that will more precisely indicate. But it's been four years.
Q. And when you say an e-mail, that's an e-mail that you produced on the flash drive

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that you provided a week ago?
A. Yes.
Q. So you do recall that you were in Madison during April of 2011?
A. Yes, I was definitely in Madison on April -- on April 15 because I remember the protest at the state capital distinctly because it was tax day.
Q. How many days were you in Madison on that trip that took you there on April 15?
A. Oh, at least two or three. Just to clarify, I was also doing work in Illinois at the time, in Chicago. So sometimes I would be in Chicago, then hop the shuttle up to Madison or hop the bus up to Madison and then come back through Chicago and come home. So sometimes the travel gets a bit scrambled up or I may have been back and forth.
Q. I understand. So those two or three days when you were in Madison in mid April in 2011, was that the first time that you came to Madison for the purpose of legislative redistricting in 2011?
A. As far as I can recall, yes.
Q. Do you recall who asked -- strike that

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question.
Do you know why you -- what prompted your trip to Madison around that time?
A. Well, I was being retained to work on the re-map, so Mr. McLeod and Mr. Troupis wanted me to meet with Mr. Handrick and Mr. Ottman and Mr. Foltz and get a sense of the sort of measures and statistics that they might require in generating analysis for them presumably on behalf of the legislature for the purpose of redistricting.
Q. And that was reflected in the engagement letter that you signed, correct?
A. Yes.
Q. Let's turn to that engagement letter, Exhibit 35 in front of you. And I would like you to look under the Scope of Engagement and Expectations.
A. Okay.
Q. This will probably look somewhat familiar to you. Do you see that first paragraph that says, "As a consultant to MB&F in connection with the representation, we expect your duties to include service as an independent advisor on the appropriate racial

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and/or political makeup of legislative and congressional districts in Wisconsin." Do you see that?
A. Yes.
Q. And that's stated as an expectation, correct?
A. Yes.
Q. And did you in fact serve as an advisor on the appropriate racial makeup of legislative and congressional districts in Wisconsin?
A. I would say that my input -- I provided statistics and analysis as appropriate. I would say that in terms of advice, the advice was more skewed towards the racial rather than the parties that make up the district. This was the area of particular concern where I could put my expertise to work.
With regard to political makeup, this was solely in the form of generating estimated partisan composition of the districts. Beyond that indicating a preference for district maps and designs, I didn't offer any counsel in that form.
Q. You created the regression model, you

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gave it to the mapmakers and let them do with it what they were going to do with it?
A. Yes.
Q. But you did in fact act as an advisor on the political makeup of the legislative and congressional districts in Wisconsin to the extent that you just testified?
A. Yes.
Q. And the next sentence sort of bears that out. Right? It says, "This will include in part providing advice based on certain statistical and demographic information and on election data or information."
A. Yes.
Q. You did do that?
A. Yes.
Q. The next paragraph reads, "All work performed by you in connection with the representation shall be for the sole purpose of assisting MB&F in rendering legal advice to the senate and assembly." Do you see that?
A. Yes.
Q. And MB&F, that's Michael, Best & Friedrich, correct?
A. Yes.

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Q. That was Mr. McLeod's firm, correct?
A. Yes.
Q. The next sentence reads, "Said work contemplates services of a character and quality that are adjunct to our services as lawyers and you shall perform said work at our direction." Do you see that?
A. Yes.
Q. Did you in fact -- strike that question.
In fact, the work that you provided, was that done at the direction of the legislative redistricting team in Wisconsin?
A. Yes.
Q. And that was Mr. McLeod, Mr. Troupis, Mr. Handrick, Mr. Foltz and Mr. Ottman?
A. Yes.
Q. Anyone else that I left out?
A. I just want to make sure that I'm clear. Actually, Doug, just to clarify, I was retained by Mr. McLeod. Mr. Troupis was present in the process. I discussed with Mr. Ottman -- Mr. Ottman and Mr. Foltz and Mr. Handrick the type of analysis statistics that might be generated and then did so. Beyond

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that there was very little in terms of any -- actually, I don't recall any direct direction coming from Mr. Troupis or Mr. McLeod or, for that matter, the staff regarding anything other than a technical execution of the statistical assessment of their product.
Q. "Their product" being the configuration of the districts?
A. Configuration of the maps, yes. Yeah. So I mean, it was very soft guidance. Very soft direction, for lack of a better way to put it.
Q. Okay. I understand.
A. Yeah.
Q. The next paragraph -- I'm sorry. Before I get there it says, "Accordingly, all communications between you and MB&F, as well as communications with the senate and assembly and work performed by you in connection with representation, shall be confidential and made solely for the purpose of assisting counsel in rendering legal advice." Do you see that?
A. Yes.
Q. And did you in fact keep communications and your work confidential at

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least up until the time that you were identified as an expert and had to turn everything over in the Baldus case?
A. Yes.
Q. Is there anything from the work that you did as a consultant on legislative redistricting in 2011 that you have not turned over that you've kept confidential up to this point in time?
A. I've turned over everything in my possession.
Q. The next paragraph states, "You will not discuss with or otherwise disclose to anyone or with any entity other than MB&F and the senate or assembly without a written authorization the nature or content of any oral or written communications or of any information or your work performed related to the representation." Do you see that sentence?
A. Yes.
Q. And did you adhere to that direction?
A. Yes.
Q. You did not speak to any -- directly to any of the elected officials in the assembly or the senate during the time that you were

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performing consulting services, correct?
A. I had two contacts with elected officials in my time consulting for the assembly. I walked over with Joe Handrick to the Capitol building because Joe was meeting with the -- I can't -- when you have a pro tem and a speaker who are brothers, it's a bit difficult to disentangle which one is which. He was meeting either with the speaker or the pro tem in passing. I don't recall what the meeting was about. It was very brief. I just walked over to be introduced. We didn't talk about substance of the map. As I recall, that probably was with the speaker, as I recall.
On one occasion the pro tem did come over to the mapping room to look at some data that we had and I was introduced and explained to him how one of these large spreadsheets that we're going to be talking about, which I think were informally called the heat maps, for lack of a better way to put it because of the visualization of color, to basically explain how to interpret that. And that was the totality of my contact with lawmakers in this process.

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Q. And so when you say the pro tem, that was Senator Fitzgerald, correct?
A. As opposed to Speaker Fitzgerald, yes.
Q. His brother, who was in the assembly.
A. Yes.
Q. Yes.
A. Again, I may have them transposed. But it was the two Fitzgeralds.
Q. You were not asked to sit in on any meetings with any members of the state senate or the state legislature when different map configurations were presented to them, correct?
A. No, I was not asked to sit in on any meetings with any lawmakers about any map configurations.
Q. And you didn't talk to any lawmakers on the telephone about any map configurations and didn't communicate with them by e-mail? Just had no communications whatsoever other than the two that you mentioned here today, correct?
A. I am certain I didn't. And if I did, I sure as hell don't remember, yeah.
Q. I don't have anything to suggest that you did.

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A. No. But it's -- I mean, I'm sitting here wracking my brain. And literally the only contacts I had were those two.
Q. The next sentence goes on -- again we're on Exhibit 35, the last paragraph on the first page. Middle of the paragraph goes on to state, "You will not disclose or permit inspection of any papers or documents related to the representation without our written authorization in advance. All workpapers, records or other documents or things, regardless of their nature, and the source from which they emanate, which are related to the representation, shall be held by you solely for our convenience and subject to our own qualified right to instruct you with respect to possession and control." Do you see that language?
A. Yes.
Q. And you did adhere to that directive until you had to produce things in the Baldus litigation, correct?
A. Yes.
Q. And then it goes on and the rest of that paragraph reads, "Any workpapers or

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materials prepared by you or under your direction belong to the senate pursuant to the representation and every page must be sealed or otherwise stamped 'Attorney/Client Work-Product Privilege Confidential'." Do you see that?
A. Yes.
Q. And again -- well, strike that. Let me ask you this question. Did you do anything to seal or stamp materials in your possession as attorney/client work product privileged confidential?
A. No, but I also generated no actual paper that ever left Madison.
Q. And you just qualified actual paper that never left Madison. Was there paper that actually stayed in Madison that you generated?
A. I mean, as we're going to be talking about these very large spreadsheets, those were printed out on a wide carriage printer for use of examination.
Q. I understand.
A. Yeah. Yeah.
Q. I understand. Okay. Very good. And then the other -- the one other aspect of this letter I wanted to ask you about is under the

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Term and Payment for Services section on Page 2. If you go down to the fourth paragraph it says, "While you will be a consultant for MB&F, the senate and assembly for whom your services are being procured are solely responsible for payment of your services pursuant to a retainer that has been established." Do you see that?
A. Yes.
Q. And was it your understanding that you were providing consulting services to the senate and assembly?
A. Yes.
MR. POLAND: Let's set that aside. You know, we've got five minutes to a tape change. Why don't we go off the record while we change the tape?
THE WITNESS: Sure.
MR. POLAND: I'm going to take a look at more of the e-mails that you mentioned as well.
THE WITNESS: Okay.
THE VIDEOGRAPHER: Going off the record. The time is 10:43 a.m.
(Recess.)
THE VIDEOGRAPHER: We're back on the

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record. The time is 11:06 a.m.
Q. (By Mr. Poland) Dr. Gaddie, before we broke we were talking about your trips to Madison for the purpose of legislative redistricting consulting in the spring of 2011. Do you recall that?
A. Yes.
Q. And you had mentioned in your testimony that you believe there are some e-mails that might help you to specify or put some better time estimations around when that travel occurred, is that correct?
A. Yes.
Q. All right. Let's take a look at some of those e-mails then and see. Can you identify -- and I see that you've got pulled up in the computer in front of you the flash drive that you produced last week. That's Exhibit Number 31.
A. Yes.
Q. And does that have some files that help you to give more precise estimates of the dates that you were in Madison?
A. They should be able to, yes.
Q. Are there any in particular that you

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can identify?
A. Well, again, I would have to look in to them to say. But certainly the travel confirmation from Expedia dated June 13 would have been for travel to Madison.
Q. All right. And so let me stop you right there a second. So when I open that up and I look at that file what I see -- and we're just going to have to look at it on the screens. We don't have a printed copy of that.
A. That's fine.
Q. But it appears that you had traveled -- left Oklahoma City on June 13, 2011. Do you see that?
A. Yes.
Q. And then it looks like you were going to -- going through O'Hare and then arriving in Madison that same day, correct?
A. That's correct.
Q. And then it looks like your return flight was on June 15, 2011, is that correct?
A. That sounds correct, yes.
Q. All right. So that's one trip that you took to Madison, correct?
A. Yes.

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Q. Why did you travel to Madison between June 13 and June 15 of 2011?
A. Because I was asked to travel there.
Q. Do you know why you -- well, strike that question.
Who asked you to travel there?
A. I believe I was contacted by the redistricters, by Eric McLeod and Joe Handrick, and asked to travel there. I seem to recall there may have been some communication involving Jim Troupis as well. At this point we were wrestling with issues of how to finalize the districts in Milwaukee. And as I recall, that's where much of the conversation focused.
Q. And that had to do with racial make up of some of the districts in Milwaukee?
A. Yes.
Q. And that was part of the subject of the Baldus litigation, correct?
A. Yes.
Q. All right. Did any of the work that you did when you traveled to Madison in June of 2011 involve any kind of partisanship analysis?
A. I don't recall.

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Q. Is there another record on the flash drive that you produced that would help you to identify other times that you traveled to Madison?
A. Well, there would have been traveling in April. Would have been travel in April around the time of tax season. So again, that time period around the 14th, 15th, 16th, 17th I should have been in Madison. I was in Madison.
Q. Let me stop you there and let's see if we can tie it to a file. I notice that there is a PDF that says Re: Flight details.pdf --
A. Yes.
Q. -- on your flash drive. Do you see that?
A. Yes.
Q. All right. Does that help you to fix with any more specificity when you were traveling to Madison?
A. Well, the part that I can view here without opening the file up, not really.
Q. Okay.
A. It's -- you know, there is an indication that my last correspondence with Suzanne Trotter about my travel date is on

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April 12. Thank you. So let's keep going back through. Okay. Here we go. If you go to the third page of the e-mail there is a flight itinerary which has me leaving Oklahoma City for Chicago on the 13th and arriving in Madison that evening and then departing Madison on the 17th to return back home going through Minneapolis.
Q. Do you know whether you were in Madison the entire time between April 13, 2011 and April 17, 2011?
A. Yes. To the best of my recollection, I never left Madison.
Q. You don't recall going down to Chicago at least on that trip?
A. No. No.
Q. And it looks like when you were in Madison, I thought I saw this here a minute ago, that you were staying -- oh, there we go. You were staying at the Concourse Hotel?
A. Yes.
Q. And that's just right off of Capitol Square in Madison?
A. Yes.
Q. When you were in Madison working from

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April 13, 2011 to April 17, 2011, whose offices were you working in?
A. I was working out of the offices of Michael, Best & Friedrich.
Q. Did you do work out of any other office during that time?
A. No.
Q. It looks like on the 17th when you returned, it looks like you left -- or at least you were scheduled to depart Madison at 12 o'clock noon, is that correct?
A. That's correct.
Q. Do you recall -- and I know this is a long time ago. Do you recall whether your flight was on time?
A. I was on Delta. Of course I wasn't on time. I don't know. I don't recall. I got very familiar with the Minneapolis airport. I can tell you that much.
Q. Got it. Okay.
A. Because I think I've been to it once, maybe twice, and it was this trip. Yeah.
Q. When you were in Madison between April 13 and April 17 of 2011, fair to say that the work that you performed at that time did

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involve partisanship analysis?
A. Yes.
Q. Other than June and April of 2011, do you recall any other times that you were actually in Madison doing work for the purpose of your consulting with legislative redistricting?
A. I'm trying to remember. There probably -- I'm trying to remember if there wasn't one other trip. It may have been a piggyback on a trip to Chicago. I can't recall. I do recall being -- I recall distinctly being in Madison because the Wisconsin Feminist Science Fiction convention was going on, and I'm a big sci fi fan. So it was kind of neat having that convention inside the Concourse Hotel while I was there. I can't remember if I was up there in May or not. But again, it's been four years. There was so much travel going on at that point in time.
I do know that the trip up in June immediately followed my anniversary trip to the Caribbean with my wife for my 20th anniversary.
Q. I notice there's also a billing record that you had produced. And this says Wisconsin

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billing, 2011/06/03.
A. Yeah.
Q. And you identify -- this is a letter it looks like you sent to Eric McLeod on June 3, 2011.
A. Yes.
Q. And you say you're attaching a bill for services performed from May 1 through the 31st. Do you see that?
A. Yes.
Q. And I didn't see attached to this any kind of receipts for travel or anything like that. Would you normally -- if you had traveled to Madison in May, would you have probably submitted receipts for travel or reflected that on an invoice?
A. Well, had I incurred any expenses I would have. Because all arrangements were booked and arranged for and billed to the law firm, I had no expenses to claim.
Q. I see. It looks like we do have one other to take a look at here.
A. Okay.
Q. You'll see there's another PDF on the flash drive that's marked as Exhibit Number 31

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and the file name is Re --
A. Yes.
Q. -- WD Wednight.pdf. Do you see that?
A. Yes.
Q. And if you scroll down to the -- I think this is the -- it's the first page. It appears that you were traveling to Madison in May?
A. Late May, yes.
Q. Late May.
A. Yes.
Q. Okay. I see that there is a -- there's just a reference to nights and we don't see dates other than the date an e-mail was sent on May 24, 2011. Do you see that?
A. Yes.
Q. All right. And it says that you're going to be arriving on a United flight at 6:50 p.m.
A. Yes.
Q. This is correspondence you had with -- the e-mail address is JoeMinocqua@msn.com, correct?
A. Yes.
Q. That's Joe Handrick?

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A. That is Mr. Handrick's e-mail address, yes.
Q. Did Mr. Handrick in fact pick you up at the airport when you arrived?
A. I believe he did. We had dinner at the Esquire Club, which is one of the supper clubs in Madison that Joe has a fondness for.
Q. Do you recall whether -- do you recall what specific date that flight was on?
A. No. It probably, given the e-mail is on the 24th, it could have been no earlier than the 25th. I was probably up there for -- again, I'm working from deep memory, but I was probably up there for no more than a couple or three days at that time.
Q. Do you believe that you were up there on or about May 27?
A. Yes.
Q. Do you have a specific recollection of being in Madison in late May of 2011?
A. I recall being there, yes.
Q. Anything in your mind's eye strike you about where you -- that might tie you to that time period in terms of the work you were doing?

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A. No. No. I mean, nothing that I can recall.
Q. Would your work at that time have involved partisanship analysis?
A. More than likely, yes.
Q. And do you recall anything specifically about the partisanship analysis work you were doing in late May?
A. No. Again, once we had developed a mechanism for baselining estimates on the districts, baselining partisanship on districts, there wasn't that much more work to be done other than applying that formula to maps that might be generated. Again, much of my concern in this time period was really with trying to get a handle on the performance of the majority/minority districts.
Q. Okay. So there are two other files that I want you to take a look at on the flash drive you produced last week. Let's go to those. Let me find it on my computer here now, too. One is New_words_-_statewide.xlsx.
A. Okay.
Q. And I need to find that, too. There it is. It's actually not too far down. It's a

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9.2 megabyte file.
A. Yeah. We're waiting for it to cycle.
Q. Okay.
MR. EARLE: Do you want me to open it?
MR. POLAND: Well, I was going to ask first about when it was created.
A. Okay.
Q. (By Mr. Poland) Can you see that on your metadata?
A. Yes. December 8, 2011.
Q. Do you know why it would have been created on December 8, 2011?
A. I have no idea.
Q. Do you know who created this file?
A. No.
Q. Why did you have this file on the flash drive that you produced?
A. It was in my possession. And if I could look inside of it and if I could see what was in it, I might be able to illuminate my answer.
Q. Let's do that.
A. Very good. Okay. Yes. These would be -- this would be a root data file that I would have been working off of to perform my

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work in retention in this case. Because if you look in this file, you'll discover there are census data aggregated up at the ward level regarding race and ethnicity drawn from the census, both total population, VAP population data, married to electoral history data, which I assume came from the State Board of Elections. These were data that were provided to me to work with in pursuit of my duties under my contract.
Q. Okay. So these were not -- this is not anything that you generated on your own. This is, like you said, the data that you were given to work with?
A. Yes.
Q. And then the last file I would like you to take a look at is Milwaukee_County.xlsx. It's Milwaukee_County.xlsx.
A. There it is. Okay. We're open.
Q. Okay. Great. When was this file created?
A. December 10, 2011.
Q. And why don't we go ahead and open it up and take a look and see what it is?
A. Okay. Okay. Again, this appears to

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be a data set much like the previous one we looked at. It appears to be only data from Milwaukee County.
Q. So again, not data that you created. This is data that you used for the purpose of your work?
A. That's correct, yes.
Q. There actually is another file that I want you to take a look at. I do have a printed copy of it. And this is actually a Word file.
MR. EARLE: Is that the one over there?
MR. POLAND: Do you know what the file name is, Peter?
MR. EARLE: Yes. It's Wisconsin Partisanship. And it's right --
MR. POLAND: Which folder is it under?
MR. EARLE: It's apparently not here.
MR. POLAND: Oh, it's in the other one. I'm sorry.
MR. EARLE: It might be. Wait a second and maybe I can tell you.
MR. POLAND: I think we have to go to the other one.

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Q. (By Mr. Poland) All right. I'm going to ask you to take a look at Exhibit Number 34, which is your Baldus flash drive.
THE WITNESS: There it is right there. Yeah, zoom that up a little bit. I didn't bring my Plus 3s today, Peter.
MR. EARLE: I'm admiring your eyesight because you're seeing stuff that I wish I could see.
THE WITNESS: Oh, these are transition lenses. Actually, I can see the wall as clear as a board, but up close it's --
Q. (By Mr. Poland) So for the record, this is a file in Exhibit Number 34. That's the flash drive from the Baldus case. It's a Word file. The file name is Wisconsin_Partisanship.docx.
A. Yes.
Q. All right. Do you have that in front of you?
A. Yes, I do.
Q. I'm going to mark a copy of that here, a hard copy of that, and we can work with it in hard copy for those of us who want to do that.
MR. POLAND: I'm not sure what exhibit

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number we're on now.
THE REPORTER: 36.
(Exhibit No. 36 marked.)
Q. (By Mr. Poland) Dr. Gaddie, I'm handing you a copy of a document that the court reporter has marked as Exhibit Number 36. Do you have that in front of you?
A. Yes.
Q. And you also have that document pulled up on the screen of the computer in front of you?
A. Yes, I do.
Q. Can you identify Exhibit Number 36 for the record, please?
A. This is a set of notes that I wrote for myself to inform my conversation with the team at Michael Best regarding the creation of a partisanship measure, the context in which it could be created -- it was being created and my steps -- my general steps in that direction.
Q. Can you tell from the metadata on the computer when Exhibit Number 36 was created?
A. Actually, it's -- for what it's worth, I believe this was created while I was in Madison during my first trip. Probably around

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April 17.
Q. Okay. So the best of your recollection, Exhibit 36 was created on or about April 17, 2011?
A. Well, according to my data it was. But, yes. I mean, I wrote this.
Q. Oh, okay. But you've got the metadata in front of you?
A. I'm looking at the metadata, yeah.
Q. Okay. All right.
A. Peter and I are getting the hang of this.
Q. You certainly are. Okay. Terrific. And so you did create this while you were in Madison?
A. Yes.
Q. Do you recall drafting Exhibit Number 36?
A. Yeah. Let's put it this way. I don't recall specifically drafting it, but I know my writing style, and this is the kind of thing I would have written. Yes, I wrote this.
Q. Do you remember where you were when you wrote it?
A. I was sitting at Michael, Best &

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Friedrich. Probably in -- I was either sitting at Michael, Best & Friedrich in one of their conference rooms or I was sitting over at the hotel, one or the other.
Q. Over at the Concourse where you were staying?
A. That's usually the only places I went when I was in Madison, other than getting popcorn down there from that little vendor by the Capitol. That's about it.
Q. You were hard at work?
A. Yeah. Yeah. They don't pay me to eat.
Q. Why did you create Exhibit Number 36?
A. Really as a -- first of all, to create a rationale for establishing the measure, that even if we weren't going into court to argue for a map that was supposed to be fair and reactive and have the court adopt a map, it was still necessary to understand the partisan effect of a map. Okay? So in the first paragraph, yes. The obligations are different, but nonetheless, we needed to understand the partisan consequence using data of any map that was created.

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In the second paragraph what I do is I indicate that I've taken the electoral data using the assembly data from 2006, '8 and '10 and constructed a regression analysis, which we talked about previously, in order to create an estimate of the vote performance of every district.
Then what I indicate in the third paragraph that this could be used to create a set of visual aids to demonstrate the partisan structure of Wisconsin politics. Okay? Communicate the top-to-bottom party basis of state politics. And the one thing I take note of in here is that the recent supreme court race in Milwaukee County executive contest appears to be -- it appeared that partisanship was invading non-partisan races. That is an observation that's made not on data but based upon a qualitative assessment at the time of the environment.
Q. Let me take you back to something that you said just at first in part of your answer.
A. Yes.
Q. You said something to the effect that it's important to understand the partisan

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effect. Why is it important to understand the partisan effect?
A. Well, again, I was writing as a political scientist. If you're going to redistrict it's important to understand the consequences of it. Lawmakers are going to be concerned about a variety of different consequences of a redistricting. The impact on their constituency, the impact on other constituencies.
If a lawmaker comes in and wants to know what you did to his district, it would be nice to be able to tell him we've got an estimate of what your district used to look like in terms of partisanship and here's what it looks like now. So this kind of technique allows us to generate a measure that you can show to somebody and explain to them, this is what we think the net electoral impact is on your constituency.
In the aggregate, it means you can look at an entire map and ascertain the extent to which you have moved the partisan balance one way or the other.
Q. And that was done, in fact, in this

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case, wasn't it, in 2011?
A. What was done?
Q. They took a look at the entire map to assess the partisan impact, correct?
A. I would have to assume so. But they certainly had the ability to do so, yes.
Q. And the decision ultimately about whether to change a map one way or the other to affect that partisan outcome is a policy decision of the legislators, correct?
A. That is correct.
Q. I want to go back and just talk about the start of the document here. You start out by saying "The measure of partisanship should exist to establish the change in the partisan balance of the district. We are not in court at this time. We do not need to show that we have created a fair, balanced, or even reactive map. But we do need to show to lawmakers the political potential of the district." Right?
A. That's correct.
Q. And you use the word "potential" there. What did you mean by the word potential?
A. If you had an election in the future,

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how might it turn out. So when I say potential, what I'm saying is that if we ran an election, this is our best estimate of what a non-incumbent election would look like given a particular set of circumstances, depending on whether one party is stronger or weaker.
Q. And that's what your regression model was designed to do, to show that potential of the district?
A. Yeah, it was designed to tease out a potential estimated vote for the legislator in the district and then allow you to also look at that and say, okay, what if the Democrats have a good year? What if the Republicans have a good year? How does it shift? Okay?
The other thing is we know that districts don't correspond precisely to our statistical models all the time. So we're not concerned just with the crafting of the district or a point estimate of the vote. It's only an estimate. There's error. Right? There's going to be a range within which the outcome might occur.
The idea was to give to those people that were mapping, those people that were

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making choices, as much knowledge as we could glean about each district by giving them the most leverage on the least amount of data.
Q. Okay. Now, the next paragraph you start out and you say, "I have gone through the electoral data."
A. Oh, yes.
Q. I'm sorry.
A. Yeah, go ahead.
Q. Was there something --
MR. EARLE: It went dark.
A. I've got a hard copy here.
Q. (By Mr. Poland) Okay. You say, "I have gone through the electoral data for state office and built a partisan score for the assembly districts." Do you see that?
A. Yes.
Q. And when you say "built a partisan score," what do you mean by that?
A. Again, an estimate of party strength. So an estimated percentage vote based on the regression equation for that district under a set of circumstances.
Q. All right. And then you go on and you say, "It is based on a regression analysis of

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the assembly vote from 2006, 2008, 2010, and it is based on prior election indicators of future election performance." Do you see that?
A. Yes.
Q. All right. Who made the decision to use those specific past elections for the purpose of the regression analysis?
A. These were the best data available. I can't recall why we started going back in time to 2006, but one thing we know in general is that more recent elections are more informative than elections that exist in the distant past. I can't recall exactly why that choice was made.
Q. Do you recall who made that choice?
A. It was really just sort of a thing that happened, I guess. I don't remember specifically.
Q. Do you recall having any discussions with Mr. Handrick or Mr. Foltz or Mr. Ottman about what data ought to be used?
A. If I had a conversation it would have been with Mr. Handrick. Generally speaking, in talking about these measures, Mr. Handrick was the only person that I would have had these

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conversations with.
Q. And why was Mr. Handrick the one that you would have talked to?
A. We just worked together in the past. Joe understands data and so it's easy to have those conversations with him.
Q. And he also had served in the assembly, correct?
A. He had served in the assembly. He had done a re-map before.
Q. Was Mr. Handrick generally familiar with the regression analysis and building a partisan score?
A. Well, I had to introduce him to the regression analysis. He sort of took my word with regard to the technique and how it would work and what it would do. So he accepted my recommendation to rely on this. And again, in no small part, because the court had relied upon it in the past. If we had to go talk about partisanship to a judge and it was Judge Easterbrook, we want to give Judge Easterbrook what he likes to see.
Q. I understand.
A. Or any judge. We want to give to

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judges a clear articulation of what we've done using the best available science. And regression analysis is the best available science.
Q. Going into the third paragraph then, you say, "I am also building a series of visual aids to demonstrate the partisan structure of Wisconsin politics." Do you see that?
A. Yes.
Q. And then you go on to say, "The graphs will communicate the top-to-bottom party basis of the state politics." Correct?
A. Yes.
Q. And what are you referring to in those two sentences?
A. Okay. There should have been -- I mean, I don't know if these were what I provided in discovery or not, but there should be two types of visuals that you should encounter which are very, very, very large files. One is a bivariate correlation table. And I want to make note of the fact that at this point in time I'm working in New Mexico, Oklahoma, Wisconsin, Illinois, Louisiana, Maryland. Okay? So I've got a lot

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of irons in the fire. But as I recall from Wisconsin, we developed a giant correlation table using precinct level data of all the statewide elections, okay, and the assembly elections. And when printed out it was probably about as big as half of this table. So we could then go through and identify how these statewide elections strongly correlated with the assembly elections. It was an ability to -- it was a way of visually explaining to someone who might ask why we're taking all these other elections, jumbling them up in an equation to predict this one vote.

We can go in and say, okay, at this point we can show the assembly election closely correlate with the Governor's race, the presidential race, whatever. So there should have been a large visual for that, unless my memory is failing me.

But then in developing maps we had developed estimates in Excel sheets much like the one we looked at previously, the Tad1_20110527 file, where I had color coded the cells to indicate the partisan direction, the intensity of partisan strength in different

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districts.

Part of what that would indicate is if you simply looked at it visually it would create something resembling something like an S curve. You could see the point at which a party got stronger or weaker, the possibility of its district tipping in one direction or another. So it was simply a visual shortcut for somebody who doesn't like numbers to look at a visualization of a map and understand how it would shift in terms of strength for one party or the other. And those were, again, very large files that if we printed them out would cover half this table.

Q. All right. I've got a couple of questions about that. Let me just ask you before I jump to the computer. You mentioned printing out this bivariate correlation table and you said it would cover about half of the -- it would cover half the table or so if you brought it in here?

A. Well, if we brought it in here, seriously, it would cover from here to you and across. A giant sheet of paper.

Q. Where was that printed out?

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A. There was a room in Michael, Best & Friedrich which was the mapping room. And if that were printed out, that's where it would have resided.

Q. All right. Do you recall seeing that printed out in Michael, Best & Friedrich's office?

A. If I'm remembering correct, yeah, it should have been in there. It never left that room, to my knowledge. But that's where I recall that file existing.

Q. Do you remember looking at it, at a printout?

A. Yeah.

Q. Was anyone with you when you looked at the printout?

A. Joe Handrick would have been with me, yeah.

Q. Anybody else that you can recall?

A. Not that I can recall. There may have been other people in the room. The only people I encountered in that room were Joe, Tad, Adam, McLeod would come in occasionally, and then that one occasion where one of the presiding officers had come in the room. Other than that

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I had no contact with anybody in that room. It was usually just the three -- it was usually just Mr. Handrick, Mr. Ottman and Mr. Foltz.

Q. And that's the mapping room when you say "that room"?

A. The mapping room, yes.

Q. All right. Now, would you be able to identify looking at either your -- the flash drive from the Baldus case or the flash drive you produced to us a week ago, would you be able to recognize those files?

A. If I see it, I'll recognize it, yes.

Q. I'm going to give you a second here or a minute or two to just sort of scroll through and see if you can identify them.

A. Okay. Why don't we start with this one? I'm starting with the Lexar file, the Lexar zip drive.

MR. EARLE: It's 31.

Q. (By Mr. Poland) That's Exhibit 31. So that's the flash drive you produced a week ago, Dr. Gaddie?

A. Yes.

MR. EARLE: Would it help to sort by size?

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THE WITNESS: It would definitely help to sort by size. And it would be -- in all likelihood it would be an Excel file.
MR. EARLE: Oh, you opened it?
THE WITNESS: Yeah, let's take a look at it. I didn't do anything. Let's take a look at it, though.
MR. EARLE: It will take a moment to pop up.
THE WITNESS: Okay. That is not it because that's another version of the root electoral data.
Q. (By Mr. Poland) Are you still on the flash drive that you produced last week?
A. Yes. And again, depending on the file, it may not be that. While it's a large printout, it's a single dimension flat file, so -- again, that's the data orientation file off of -- let's go down here and look further. May I? If you don't mind.
MR. EARLE: Help yourself.
A. Here it is. Okay. If you go down you will find a directory on the Lexar drive that is entitled Wisconsin 2010.
MR. EARLE: That's Exhibit 31.

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A. Exhibit 31, yes. And if you open it up you'll see a file that's called Wisconsin correlates which was created on April 15, 2011.
Q. (By Mr. Poland) All right. So we're on Exhibit Number 31. And I'm sorry, the file number is?
A. It's under the directory. It's under the folder Wisconsin 2010.
Q. Wisconsin 2010. All right.
A. Yes.
Q. And it's called Wisconsin_correlates.xlsx. Now, that only shows up as 111 kilobytes on mine.
A. Well, it's not --
Q. That's all right.
A. We're looking at it over here. Actually, it may not -- again, it's a physically large document printed out, but because it has -- it is only cell entries. It has no macros inside of it. It has no -- you know, it's a very simple file. It's a flat file, for all intents and purposes.
Q. I understand. Now, so I have it open and I'll wait for counsel to get there, too.
MR. KEENAN: I am. I would note that

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it's also on the Exhibit 57, too.
MR. POLAND: Okay. It's on both.
MR. KEENAN: Yeah.
Q. (By Mr. Poland) All right. So Dr. Gaddie, the table itself is what was printed out and displayed in the mapping room at Michael, Best & Friedrich?
A. This was printed off, yes.
Q. All right. Now, this -- you had referred to visual aids in Exhibit 36, in your memo.
A. Right.
Q. This is a visual aid that you referred to?
A. Yes. It's the thing we look at.
Q. Fair enough.
A. It passes the ocular test.
Q. Okay. And how exactly does the Wisconsin correlates work as a visual aid? Can you explain it to me briefly?
A. Well, again, what we have is we have a whole series of different elections that take place and we have precinct level data, VTD level data on all these elections. And what this table is, this is simply a Pearson's

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correlation coefficients table. Okay? Which means that it is testing the linear relationship between two variables. So the vote for governor at the precinct level, how does it correlate with the vote for secretary of state? The vote for secretary of state, how does it correlate with the vote for assembly? The vote for assembly, how does it correlate with the state senate? We're looking at pair-wise relationships for every election for which we have data. Okay?
And in order to explain why we should use the regression equation or why these variables were all related, generating this large visual and then showing it to people was the easiest way to communicate this information because -- I'll give you an example. If you just look at the -- I would say just look in the far northwest corner. ASM 2010 Dem. That's the assembly vote in 2010 for the Democrat on rows 3, 4, 5 -- column 3, 4 -- row 3, 4, 5. And then you look at Column C, assembly 2010 Dem, that's the vote for Democrat. You notice the Pearson correlation is one?

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Q. Uh-huh.
A. That's because we're measuring the same thing twice. Of course it's perfectly correlated. You look one column over, Dem 2010 REP, you notice there's a negative .960 with a little asterisk next to it? That's a Pearson's correlation coefficient of negative .96. What it means is that there's a strong negative correlation between the strength of the Republican vote for assembly and the strength for the Democratic vote.
The reason it's not a perfect correlation is sometimes independents run. Right? So there's a little bit of noise in there. But if you continue over. Look, for example, at ASM 2002 DEM. There's a .696 Pearson's correlation between the Democratic vote in 2002 for the assembly and the vote in 2010 for assembly. So it's not a perfect linear relationship. Okay?
So again, what we're trying to do is show initially all these elections appear to be interrelated to a greater or lesser agree. If a Person's value is negative it means that the outcome is negatively associated with the other

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variable. Okay? If it's positive, it means there's a positive relationship. The closer the absolute value is to zero, the weaker the relationship. A value of one means a perfect correlation.
So I was treating this as a data reduction technique to be able to show people why it was that we looked at these statewide elections to build a model for assembly elections.
Q. All right.
A. So that's what -- it was a big marshaling of data for about a two-minute point. Okay?
Q. And you mentioned it was done down to the precinct level. Was it at the ward level?
A. A ward is a precinct, yes. A voter turn-out district, a VTD.
Q. As small as you could get, as you had testified.
A. Smallest available unit from the division of elections, yes.
Q. All right. So this is one of the visual aids that you had constructed?
A. Yes.

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Q. And then you mentioned another that you had developed with color-coded cells to indicate what you had called the S curve?
A. Yeah. Let's see if we can find one of those. Can I close this up?
Q. Yes, please do.
A. Okay. Thank you. Let's see if we don't have one of these sitting around here. While I am not seeing one here, I can explain -- give me a moment.
Q. Sure.
A. Here's the thing. In substance they would strongly resemble the Tad_1_05272011 file, let's look on the other drive and see if we can't find a specific example.
Q. Sure. And when you said "the other drive," you mean look on the one that you produced in the Baldus case?
A. Yeah.
Q. Do you want to look in the Baldus case drive then?
A. Yeah, if you don't mind.
Q. Sure. Wherever you think it might be, Dr. Gaddie.
A. I appreciate that. Give me just a

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minute. I'm sure we're opening it eventually. Let me just make sure it's going to answer the question.
Do you want to open this up? This is not it, but it may have been the foundation. That's not it. Sorry about that.
Here we go. No, no, sorry about that. I'm sorry, gentlemen, it's been a few years since I've messed with this. So I'm going to ask you to bear with me. Thank you.
Q. Is there any kind of a naming convention that you recall using?
A. I'm trying to remember.
Q. Do you know whether -- you had mentioned S curve before. Do you know whether curve would have been in a file name?
A. It's possible. Again, here's the thing. I can remember visualizing these. I can remember their generation, and I cannot remember what I would have named them or saved -- actually, let's --
Q. If I were to have you take a look at one of my computers, would you be able to --
A. Would that be okay?
Q. Yeah, absolutely.

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A. I'm going to go off mic for just a second and walk over and look and I will come back.
MR. EARLE: In other words, he's going to be untethered.
Q. (By Mr. Poland) Just generally speaking, is this what it looks like?
A. Yes, that's what I'm looking for. Well, let me answer the question on mic.
Yes.
Q. All right. What I'm going to do then is I'm going to mark another flash drive as an exhibit.
MR. EARLE: Which should I take out?
MR. POLAND: None.
MR. EARLE: I think I'm out of jacks.
THE WITNESS: Maybe there's another jack over there. Is there another jack there?
MR. EARLE: No.
MR. POLAND: All right. Why don't --
THE WITNESS: I have an idea. Let's go off record while you guys work this out. I'm going to go to the bathroom and be back in two minutes.
MR. POLAND: That's a good solution.

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Let's do that.
THE VIDEOGRAPHER: Going off the record. The time is 11:53 a.m.
(Recess.)
(Exhibit No. 37 and 38 marked.)
THE VIDEOGRAPHER: We are back on the record. The time is 12:01 p.m.
Q. (By Mr. Poland) Dr. Gaddie, when you were working at the Michael, Best & Friedrich office in 2011, do you recall that there were several computers that were used for redistricting?
A. Yes.
Q. And do you recall that Mr. Foltz, Mr. Ottman and Mr. Handrick each used one of those computers?
A. Yes.
Q. Did you ever see any external hard drives connected to those computers?
A. Not that I recall, no.
Q. I'm going to hand you a document that's been marked as Exhibit Number 38 and ask you to take a look at it.
A. Okay.
Q. And I will represent to you that these

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are photos of hard drives, or this is a photo of a hard drive, and you will see one says Republican and one says senate Republican and ASM?
A. Yes.
Q. Did you ever see any external hard drives that looked like these in Exhibit 38 when you were working at Michael, Best & Friedrich?
A. I don't recall them.
Q. Did you ever do any work yourself on any of the redistricting at Michael, Best & Friedrich?
A. I never touched the computers inside the room.
Q. You worked exclusively on one of your own computers?
A. Yes.
Q. I've had marked as Exhibit Number 37 a flash drive and I've given copies of it to counsel. Have you ever heard -- strike that question.
Are you aware of any of the post-judgment proceedings in the Baldus case?
A. No.

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Q. Are you aware that there was some discovery into the redistricting computers that were conducted?
A. No.
Q. Are you aware that the Baldus plaintiffs obtained an order from the court allowing them to conduct a forensic analysis?
A. No.
Q. Have you ever heard of a name -- computer forensic expert named Mark Lanterman?
A. No.
Q. I'm going to remind you that the Baldus plaintiffs retained a computer forensic expert named Mark Lanterman --
A. Okay.
Q. -- who obtained possession of the hard drives, both internal and external, from the computers that were used by Adam Foltz and Tad Ottman and has conducted certain analyses on those computers. Okay?
A. All right.
Q. Now, let's take a look -- we're going to go to the flash drive that's Number 37 that I provided to you.
A. Okay.

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Q. If you look in the directory for Exhibit Number 37 you should see that there are four subfiles or subfolders. One says WRK 32587 External HD. One says WRK 32587. The next one says WRK 32586 External HD and WRK 32586. Do you see those?
A. Yes.
Q. I would like you to open the first of those folders, the WRK 32587 External HD.
A. Okay.
Q. And you should see one subfile that says External or says Responsive Spreadsheets and then there's another file that's an XL file. Do you see that?
A. Yes.
Q. I would like you to look at the XL file.
A. Okay.
Q. And open it up and take a look at it.
MR. KEENAN: Could you repeat that folder?
MR. POLAND: It should be the first of the folders that appears on that flash drive.
MR. KEENAN: 32587?
MR. POLAND: External HD. And then

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we're just going to take a look at the responsive spreadsheets file detail report.
Q. (By Mr. Poland) Okay. Do you have that open, Dr. Gaddie?
A. Yes.
Q. All right. And so you see up at the top there's a header on that document that says External HD Responsive Spreadsheet File Detail Report?
A. Yes.
Q. And this is for the computer report that's WRK 32587. Do you see that?
A. Yes.
Q. All right. Now, if you scroll down to -- I would like you to take a look at lines Number 91 through 94 on that spreadsheet. 91 through 94.
A. Yes.
Q. All right. And do you see that the file names, 91 is Tad Senate Assertive Curve?
A. Yes.
Q. And 92 is Tad Senate Assertive Curve?
A. Right.
Q. Number 93 has the same alternate file name and 94 as well. Do you see that?

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A. Yes.
Q. All right. Now, if you scroll over on the spreadsheet. Just go over to your right all the way over to the columns that identify author and last saved by.
A. Yeah.
Q. Can you identify who that is?
A. That would be my name.
Q. Right. Both as author and last saved by for lines 91 through 94, correct?
A. Yes.
Q. And what date does the meta indicate that it was created?
A. May 28.
Q. All right. At 8:12 in the morning, correct?
A. Yes.
Q. All right. Now what I would like you to do is -- well, actually, let me ask you this question first. Do you know why there would be four different -- four different files with the same name, Tad Senate Assertive Curve?
A. No.
Q. Now what I would like you to do is we're going to take a look at that file.

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A. Okay.
Q. So if you go back out to the folder itself we should be able to find it there.
MR. EARLE: Let me make this -- oh, shit.
MR. POLAND: We're on the record, Peter.
MR. EARLE: Oh. No, the court reporter's hands weren't on it. I'm trying to make it easier for Keith to see here. Let me get the screen adjusted. I'm trying to move a column over.
Q. (By Mr. Poland) So we're going to be looking in the folder that says WRK 32587 External Responsive Spreadsheets Duplicated.
A. Okay.
Q. It's actually not very far down, at least in my directory.
MR. EARLE: Can you give me the name again?
MR. POLAND. Sure. It's Tad Senate Assertive Curve.
MR. EARLE: Do you want me to open it?
MR. POLAND: Yes, please open it.
Q. (By Mr. Poland) Are you there?

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A. Yes.
Q. Now, just before we broke you had been talking about a visual aid to indicate what you called an S curve.
A. Yes.
Q. Is this file that we're looking at right now, this Tad Senate Assertive Curve, is that what you're talking about in terms of a visual representation of an S curve?
A. Yes.
Q. I'm not familiar with the term S curve.
A. Okay.
Q. Could you please describe what that is?
A. Yeah. Now, let me lay this aside over here. There is a mini lecture, but we're going to keep it tight. In single member district systems, especially under a two-party system, the responsiveness of votes to seats is not expected by political scientists to be strictly proportional. That is to say, if you get 60% of the vote you're not expected to get 60% of the seats. If you get 40% of the votes, you're not expected to get 40% of the seats. The

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expectation is that the combination of competitive and noncompetitive districts will create a seat bonus for parties that get a disproportionately large number of seats based on relatively small majorities and then that effect tapers off. Similarly, if you're falling below 50%, you may incur a somewhat larger penalty in terms of the seats that you accrue. Okay?
So instead of having a relationship where, let's say, you know, this is the number of seats you get on this axis and this is the number of votes you get on this axis, if there were a one-to-one relationship you would expect to see a 45 degree curve. What the S curve does is it moves like this. At 50% of the vote you expect to get 50% of the seats. But once you get above that you're going to get some bonuses and it eventually will taper off and you're going to hit a ceiling above which you cannot gain additional seats because the other parties will be too secure. Similarly, as you fall off, you'll hit a floor that you can't drop below. That's the S curve.
What we have here is a representation

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of what an S curve response might look like in order to help people visualize the impact on particular districts. Okay? Because in a traditional S curve representing the percentage of districts you win relative to the percentage of the vote that you obtain.
What this visual does is it orders districts from the strongest to the weakest for one party or another. Okay? And it shows based upon an expected statewide vote for one party or the other which seats are going to tend more Democratic shaded in blue, more Republican shaded in red. Light blue means that they're Democratic tending, but competitive. Orange means they're Republican tending but competitive.
You'll notice that as we move to the left the Democrats are stronger, the Republicans are weaker, more seats come into play for the Democrats or become safe for the Democrats. As we move to the right more seats become safe for the Republicans and fewer seats become safe for the Democrats.
So for this map, and there should be other examples, what we do is you simply -- you

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generate the point estimate from the regression equation of the expected vote and then it is simply color coded based upon the vote range using one of -- using a macro in Excel so that after you've coded in the initial vote share from the actual regression equation, as you move the value of the vote for one party either up or down, you can see the responsiveness of the districts and how they shift and the number of seats that come into play for one party or fall away.
So again, a visualization of both the distribution of partisanship in the districts and the sensitivity of individual districts to changes and partisan strength across the state, assuming that the entire state shifts in the same direction one way or the other. And that's what this device was meant to do.
Q. Now, I note that the file name is Tad Senate Assertive Curve.
A. Yes.
Q. Does that have any meaning for you?
A. This was an aggressive map. It's an assertive map. This is a map that, indeed if you look at it, it is a map that makes an

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assertive move towards Republican advantage.
Q. Do you know -- strike that question.
We saw just a minute or two ago when we looked at the directory that this was created toward the end of May when you were in Madison, correct?
A. That's correct.
Q. All right. Did you create this S curve on your own computer, do you recall?
A. When I first created these I created them on my own computer. Doug, I'm trying to remember. The first time I created these, I created them on my own computer. I have no memory of ever touching one of those machines in there. In fact, this was one of my terms and conditions was I'm not supposed to touch the machines. So I would have created this curve, given the file to Tad because I couldn't print the big wide carriage printer from my laptop. It had to go to one of the three mapping machines to be able to communicate with the wide carriage full color printer inside, inside the room.
Q. So these were -- these S curves were actually printed out, is that correct?

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A. Yes, at least some of them were. I can recall some being printed out, yes.
Q. Do you recall whether the Tad Senate Assertive Curve was printed out?
A. I don't remember.
Q. Do you recall specifically any of them that might have been printed out?
A. Offhand, no. I recall -- I can recall some being printed out. I can't recall which ones.
Q. Did you look at these printouts with any of the other members of the redistricting team?
A. The only people I ever looked at these curves with were Mr. Ottman, Mr. Foltz and Mr. Handrick. I cannot recall if the pro tem was in the room when we looked at one of these or not, but he's the only lawmaker I ever saw in the room. I can't recall if we showed him this visual or not.
Q. All right. And that's Senator Fitzgerald, correct?
A. Yes.
Q. Do you know how close this Tad Senate Assertive Curve mapped up with the -- strike

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that.
Do you know how the senate district boundaries represented by the Tad Senate Assertive Curve matched up with the boundaries of the final map?
A. I don't know.
Q. When you were gathering your responsive data to respond to the subpoena in the Baldus case and also to respond to the subpoena in this case, do you recall ever seeing any of these S curve maps among the materials that you reviewed?
A. I don't recall. I simply turned over all material.
Q. Do you know why these files might not have been on your computer but were on Mr. Ottman's computer?
A. No.
Q. You can close out that file. I would like to take you back to the directory that we were looking at before, which is the external HD responsive spreadsheets file detail report.
A. Uh-huh.
MR. EARLE: That's 87 external?
MR. POLAND: I'm sorry. Yeah. That's

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WRK 32587.
Q. (By Mr. Poland) If you'd scroll down and you look at lines 145 through 147, please. And you'll see those again say Tad Senate Assertive Curve. Do you see that?
A. Yes.
Q. And then if you scroll over in the spreadsheet over to the author and last saved by, you'll see that you are identified as the author of those three, correct?
A. I'm not seeing it yet.
Q. Okay.
A. Are we there yet?
Q. It's Column H.
A. Thank you.
MR. EARLE: Wait a second. This moves a lot faster.
MR. POLAND: These are Lines 145 through 147.
MR. EARLE: Got it.
A. I see that.
Q. (By Mr. Poland) Do you see that you're the author?
A. Yes.
Q. And then you see it says last saved by

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T. Ottman?
A. Yes.
Q. And that's Tad Ottman, correct?
A. Yes.
Q. Then I would like you to scroll down to Rows 247 through 250. Let me know when you're there.
MR. EARLE: We're there.
Q. (By Mr. Poland) Okay. So do you see the 247 through 250, the name is Senate Current Curve?
A. Yes.
Q. Do you see that?
A. Yes.
Q. And then if you again scroll over to look at the author and last saved by, you'll see those are both -- those both have your name, correct?
A. Yes.
Q. And do you see that there is a created date as well?
A. Yes.
Q. And it's the same date, correct, 5/28?
A. Yes.
Q. Do you know, just looking at the file

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name -- and we'll open up the file here in just a second -- do you know offhand what the Senate Current Curve represents?
A. That should have been the curve for the baseline map, for the pre-redistricting map.
Q. Does this indicate that, in giving the time that you're looking at these, that there was a comparison of the S curves of the current map with the Tad Assertive Map?
A. It's possible, yes.
Q. Let's go ahead and find the Senate Current Curve among the spreadsheets themselves and let's open that one up.
MR. EARLE: Tell me which one again.
MR. POLAND: Sure. Senate Current Curve -- it's actually not -- it's one, two, three, four, five, six -- it's seven down in the external -- the WRK 32587. Do you see it?
THE WITNESS: Right there above my finger.
MR. POLAND: Are you there?
THE WITNESS: Uh-huh.
Q. (By Mr. Poland) Okay. This looks like a very, very -- just to my untrained eye it

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looks like a very different picture than what we saw from the Tad Assertive Map. Am I correct in that?
A. Yes.
Q. All right. How so? How is it different?
A. Well, I would have to look at both of them to tell you. The band of responsive districts at the mid point are -- it's broader and it is less heavily skewed to the Republicans, according to this graphic.
Q. So the Tad Assertive map that we looked at for the senate was more heavily skewed in favor of the Republicans, is that correct?
A. Yes.
Q. And as you're testifying today, you don't know whether that reflects the senate districts that were ultimately part of Act 43?
A. That's correct.
Q. Do you recall putting side by side any of these S curves that -- printouts of the S curves that had current districts versus other potential districts?
A. I don't recall.

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Q. Did you recall making any observations or recommendations to Mr. Ottman, Mr. Handrick or Mr. Foltz about the aggressive nature of the maps that were being revealed or displayed by the S curves that were created?
A. I don't recall any specific comments. I might have made a recommendation. I'm sure it came up, but I don't remember.
Q. All right. I want to go back then just to see if there were any other spreadsheets that I want to look at from that external hard drive. So give me just a second here.
I think I'm done with the external -- that particular external hard drive. What I would like to do then is go through the same exercise on the next computer, the WRK 32587. So if you look up -- open up the responsive spreadsheets file data report for the 32587 computer.
MR. EARLE: We're there.
Q. (By Mr. Poland) Okay. If you would go to Rows 149 through -- well, let's just start out with 149. Let me ask you about 149 through 159.

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A. Okay.
MR. POLAND: And are you there?
MR. KEENAN: Uh-huh.
Q. (By Mr. Poland) Okay. So you see that all of those are senate current curves?
A. Yes.
Q. And you see that if you -- actually, scroll over to the author, you'll see that you are identified in 149 through -- I'm sorry, through 158, I think it is, you're identified as the author of each of those?
A. Yes.
Q. All right. Now, on 149, Row 156 and Row 158, it indicates they were last saved by you, correct?
A. It appears so, yes.
Q. And the others, which is Row 150, 51, 52, 53, 54, 55 and then 57, Mr. Ottman last saved those, correct?
A. Yes.
Q. All right. Now, if you scroll back over to the left again where we had the -- where we had the file name, you'll actually see a file path.
A. Right.

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Q. Do you see that?
A. Yeah.
Q. All right. Now, I would like you to look at 149, 150, 152, 154. Do you see that in each of those file paths there's a reference to Drop Box?
A. Yes, I do.
Q. Did you ever use Drop Box in transmitting any files to Mr. Ottman or receiving any files from Mr. Ottman?
A. I didn't start using Drop Box personally until just a couple of years ago. Doug, I'm going to have to guess into this based upon what was going on in the room. I created these series of initial curves. I would assume that we logged to Drop Box, moved them from my computer to Drop Box and pulled them down. I don't remember. But I created these initial files, I know that.
Q. Okay.
A. But how -- but again, I hadn't started using Drop Box for any purpose until in the last couple of years. And I've never used it for transmitting districting documents. I don't remember doing those, but it must be why.

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We had to find a way to get files off of my laptop to their machine to be able to print. And the wireless was lousy, so I couldn't e-mail them.
Q. You don't recall using flash drives for any of that?
A. It could have been a flash drive. Doug, I just don't remember. We got them off my machine and got them to them. And one thing you'll note is that a file will be accessed and then saved later by Tad, open it up, prepare it for printing, save it. It's entirely possible he -- the other thing is, once you create this type of file, it's possible to load new data into it and create new spreadsheets if you have access to the regression equation we talked about previously.
I don't recall that happening. But I generated these -- I generated these initially on my computer and created them and then handed them off to Mr. Ottman. And I would imagine to Mr. Foltz as well. I just don't remember. Because we did these for both assembly and for senate.
Q. Would you take a look also at -- we're

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going to look at Rows 169 through 178.
A. Yes.
Q. And so you see those are Tad Senate Assertive Curve?
A. Uh-huh.
Q. All right. You've got the same file name that we had seen before, correct?
A. Yes.
Q. All right. And if you scroll over then to the author and last saved by, again, we're going to see that you're identified as the author of each of those and then on the files that are at Rows 169, 172 and 176, it indicates they were last saved by you and the others were last saved by Mr. Ottman, correct?
A. Yes.
Q. Now, as I -- if you go over and if you look at the file path a little bit further over to the left.
A. Right. Correct.
MR. EARLE: There you go.
THE WITNESS: There we go.
Q. (By Mr. Poland) There is an indication -- in the 169 file path it indicates Drop Box, correct?

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A. Correct.
Q. Do you see that the next row, 170, it says in the file path, there's -- one of the names that's in there, it says January maps for discovery. Do you see that?
A. Yes. Yes.
Q. Does that have any meaning to you at all?
A. Particular meaning, no. I mean, I can infer from the file, but I have no particular -- it has no particular meaning to me.
Q. It doesn't. Okay. Yeah, I don't want you to infer there.
And then 178, do you see it also identifies Drop Box?
A. Yes.
Q. And you never received any kind of credentials to use Drop Box, a user name or a password or anything like that?
A. No. Like I said, I've only been on Drop Box for a couple of years.
Q. Did anybody ever while you were there log onto your computer and set you up with Drop Box or Switch It or anything?
A. I don't recall. I don't know.

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Q. Let's take a look then and go into the spreadsheets themselves.
A. Okay.
Q. So that would be under the WRK 32587 responses spreadsheets duplicated.
THE WITNESS: Peter, I'm working real hard to not read your instant messages.
Q. (By Mr. Poland) And so let's take a look at -- the Senate Current Curve is the first one that comes up for me. It's actually telling me that I can't open it.
A. Should we try it over here?
Q. Yeah.
MR. EARLE: You want senate -- I'm going to close my email. Let me just jump over here for a second. I'm sorry about that.
MR. POLAND: No worries.
MR. EARLE: It says I can't open it either.
MR. POLAND: You know, it repaired it for me. I don't know if that --
MR. KEENAN: I had to click "yes."
MR. POLAND: Yeah, I did, too, and it repaired it.
MR. EARLE: Open and repair. It

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repaired it, but I'm hesitant to save the changes it made to it. I don't know. Which one are we in?
MR. POLAND: This is Senate Current Curve.
MR. EARLE: Okay. But I'm afraid -- can we go off the record for a second?
MR. POLAND: Sure.
THE VIDEOGRAPHER: Going off the record. The time is 12:31 p.m.
(Recess.)
THE VIDEOGRAPHER: We are back on the record. The time is 12:35 p.m.
Q. (By Mr. Poland) Dr. Gaddie, you have the Senate Current Curve Excel spreadsheet open that --
A. Yes.
Q. -- we were discussing? All right. This looks, to my eye at least, very different than the previous current curve, Senate Current Curve, that we had seen. Am I wrong in that?
A. I don't know. I would have to look at them both. Can we open up both side by side?
Q. Sure. Remember you had said before in the other one it looked like there was a band

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that was going across the middle? We don't see that one here.
A. Okay.
Q. We can certainly open them up side by side if you'd like.
A. Actually, if you could open the other one up where I can just look on the screen and that screen just a moment if you don't mind.
Q. Oh, yeah, let me do that. So on my computer then we'll have up the Senate Current Curve that came from the WRK 32587 external hard drive. And then you've got from the WRK 32587 on yours?
A. Okay. Actually, the reason they're different --
Q. Yes.
A. If you're asking me to illuminate the difference.
Q. Yes.
A. If you look at this file that is on my screen, it has been sorted from strongest to weakest district. That one, if you look, is sorted by a senate district number.
Q. I see. Okay.
A. So if we sort that from strong to

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weakest, it should sort itself out to look like the curve like we have here.
Q. Okay. Got it. So what I did was I went through and I clicked on Composite. Would that do it?
A. Well, let's see. Yeah. No, that's not it either.
Q. That's not it either. Okay. All right. But it should do that?
A. It does.
Q. It appears to you that it's a sorting issue?
A. It's a sorting issue.
Q. Okay. Well, you can close out of that spreadsheet. Or I'm sorry, I'm going to close out of that spreadsheet. And I'll also close out of the other senate current curve.
MR. EARLE: Close this one?
MR. POLAND: Yes, you can close that one, too.
Q. (By Mr. Poland) The other that I wanted to have you open on the WRK 32587 responsive spreadsheets is the Tad aggressive -- I'm sorry, Tad Assertive. Although as I scroll down I see there's a Tad Assertive Curve

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and then there's a Tad Senate Assertive Curve 1.
A. Yes.
Q. Do you see those right below one another?
A. Yes.
Q. Let's take a look at the Tad Senate Assertive Curve first.
A. Okay.
Q. And I'm getting the same open and repair message as I had before.
MR. EARLE: I think we're all doing the same thing. That will be on the exhibit itself, the repair.
MR. POLAND: That will be on the exhibit?
MR. EARLE: That's what we're working off is the exhibit itself.
MR. POLAND: Yes. Yes.
MR. EARLE: So the record shows that is all I'm saying.
Q. (By Mr. Poland) Are you there, Dr. Gaddie?
A. Yes.
Q. Let's leave that one up and then let's

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open up the Tad Senate Assertive Curve 1. And are you able to view both of those at one time?
A. Yes.
Q. Side by side?
A. Well, side by side --
Q. There is actually a way to do it if you put your cursor over the little green circle in the upper left-hand corner and you hold it, it will take up half the screen.
A. Bear down on it. Oh, there we go. No. No.
MR. EARLE: I did something wrong. What did I do?
THE WITNESS: I don't know.
MR. EARLE: I'm sorry.
THE WITNESS: That's all right, Peter. I have an idea. Let's just escape out of that. Hang on.
MR. POLAND: I can also have you take a look on my screen if that would be easier.
THE WITNESS: I think we're getting this worked out here. Okay. So this is Curve 1 and this is Curve. Okay. Yes.
Q. (By Mr. Poland) Is there a difference between the Tad Senate Assertive Curve and the

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Tad Senate Assertive Curve 1?
A. Yes, there are a set of differences that illuminate. The assertive curve has a broader range of competitive districts if you look around where it says composite or all 50. And there's a more even balance. The Assertive Curve 1 has a narrower band. Now, I -- I'm not -- okay. These are not -- I mean, if you look at the numbers inside the cells, these are not data from the same map.
Q. They're not data from the same map?
A. Well, I mean, the inputs can't be data from the same map because the output is different.
Q. Okay.
A. It's possible that this could be a saving of another map or of the baseline map and the data file name wasn't updated.
Q. So there are two different maps that are portrayed on these two different S curves?
A. Potentially, yeah. But these are definitely not the same district data going into computing this. These are not data for the same map.
Q. Again, just from my eye, it looks like

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the Tad Senate Assertive Curve 1 has more safe Republican districts and more safe Democratic districts, too. Am I looking at that wrong?
A. Let's focus on a particular -- where -- Counsel, where in the -- let's pick a particular column to look at. So let's say we look at the column that says --
Q. How about Index 58, for example?
A. Index 58. Okay. We're getting pretty far over in the skew.
Q. Yeah.
A. But, yeah, let's go over that. Index 58 there is only one competitive district in the entire map, and it's a Democratic leaning map. Now, let's recall, however, this is also an estimate of the partisan performance of the plan where Republicans were averaging 58% of the votes statewide. That's what Index 58 means.
Q. And that reflects the way that that particular map was drawn, correct?
A. Yes. So if we were to look over at Index 50, we would discover that again there's only one competitive leaning Democratic district, a number of safe Democratic

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districts. Most of the competitive districts are leaning Republican in that map. If we look at the other graphic assertive curve, which I think I'm -- again, you know, I'm looking at these data for the first time in four years. This appears to be the baseline map or a different map that's not nearly so assertive. You'll notice that there are other more Republican than Democratic leaning districts or a sizable number of both. And while there are more safe Republican than safe Democratic districts, there's a sizable number of both. There's a broader band of competition in the assertive map than there is in the assertive 1 map.
Q. Do you know who drew the maps that generated this output?
A. Well, I would assume since it's -- I would assume since it's a senate map it would have been Mr. Ottman.
Q. And since it says Tad Senate Assertive?
A. Right. Yeah.
Q. Let's close out of those then.
MR. POLAND: This might be a good

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place to break for lunch.
THE WITNESS: I'm doing fine if you want to keep going. If you need a break, we can break.
MR. EARLE: I think we should take a lunch at some point.
MR. POLAND: Why don't we do it now. Let's go off the record.
THE VIDEOGRAPHER: Going off the record. The time is 12:45 p.m.
(Recess.)
THE VIDEOGRAPHER: We are back on the record. The time is 12:52 p.m.
Q. (By Mr. Poland) Dr. Gaddie, I would like to move now to a different -- one of the hard drives that should be on the directory --
A. Yes.
Q. -- of the flash drive that you've got there. I would like to look at WRK 32586 external HD.
A. Okay.
Q. All right? And so let's open up the external HD responsive spreadsheets file detail report file. And let me know when you've got it open.

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MR. EARLE: We're open.
Q. (By Mr. Poland) All right. I would like you to look at Row 4. Do you see there's a file name Wisconsin Correlates.xlxs?
A. Yes.
Q. All right. Now, if you scroll over to the right, over to author, you'll see that the author is listed as CAS build. Do you see that?
A. Yes.
Q. And that's you, correct?
A. Yes.
Q. And it says it was last saved by A Foltz. That's Adam Foltz, correct?
A. Yes.
Q. And then the created date indicates it was April 15, 2011, correct?
A. Yes.
Q. And that's during the time that you were in Madison, right?
A. Correct.
Q. Let's take a look then at that particular spreadsheet.
A. Yes.
Q. And do you know how to pull that up on

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the -- from the flash drive?
A. I'm letting Peter fly.
Q. All right.
MR. EARLE: Give me the name again.
THE WITNESS: Wisconsin Correlates.
MR. POLAND: Wisconsin Correlates.
MR. EARLE: XLXS?
MR. POLAND: Uh-huh.
A. Okay. We're there.
Q. (By Mr. Poland) All right. I'm almost there.
Now, this is not an S curve, is it?
A. No.
Q. What is this particular file?
A. You recall previously we discussed a file that was in the documents I gave you all that were the Wisconsin correlates, the large Pearson correlates data set. This is just a re-rendering of that same file. So these are the same data that were in that file. So this is a table of Pearson's correlates between different statewide elections and elections for assembly again at the ward VTD precinct level.
Q. Is this a file that you had intended again as one of the visual aids that would be

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printed out and displayed?
A. Yes. In fact, this is probably the version that was printed out and displayed.
Q. Do you recall again who was there when it was printed out and displayed in the map room?
A. Again, Mr. Handrick and I looked at it. I would assume Mr. Foltz and Mr. Ottman.
Q. Okay. The next -- you can close out of that spreadsheet.
The next row I wanted you to turn to in the external HD Responsive Spreadsheet File Detail Report is Row 18.
A. Okay.
Q. Tell me whenever you're there.
A. Okay. We're there.
Q. Do you see that the file name ends with composite_joe_assertive_curve.xlsx?
A. Yes.
Q. Does the "Joe" there refer to Joe Handrick?
A. Yes.
Q. And what is meant by "assertive curve?"
A. There was a characterization of some

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maps by the map drawers and one was a map that was an assertive map, was the term that they used.
Q. Do you know what they meant by "assertive?"
A. I would assume politically assertive.
Q. Meaning more aggressively pro Republican?
A. Yes.
Q. If you look at -- again, this is Row 18. If you look over at the author, you'll see that you're identified as the author?
A. Yes.
Q. And it --
A. Actually, that would be Column H. Yes.
Q. Yes, Column H, correct. And you'll see that it was last saved by Adam Foltz, correct?
A. Yes.
Q. And it indicates it was created on May 20, 2011, correct?
A. Correct.
Q. And that was during the time that you were in Madison, right?

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A. Yes.
Q. Let's open up that spreadsheet then.
A. Okay.
Q. This is Composite Joe Assertive Curve.
A. Yes.
Q. All right. And do you have that up in front of you? Do you have it up in front of you?
A. Yes.
Q. All right. Do you recall this particular plan that generated this S curve?
A. I recall that there was -- I recall that there was a plan. Details of it I can't tell you, but I recall generating this curve off of the data from this plan, yes.
Q. All right. Was this plan in particular compared to any other plan that you know of?
A. Again, they may have compared it to other plans. They may have compared it to the baseline plan.
Q. When you were present?
A. No.
Q. No. Do you know why Joe Handrick would have been creating plans as opposed to --

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actually, strike that question.
Is this for the -- this is for the assembly, correct?
A. Judging by the number of districts, this has to be an assembly map, yes.
Q. Do you know why Mr. Handrick would have been drawing a map that was an assertive map?
A. I don't know. I guess he was drawing an assertive map.
Q. Okay. Did you talk to him at all about -- discuss with him the assertive map that he drew?
A. Well, I mean, I talked with him about this product. We discussed the skew of the map, the Republican leading nature of it, how strong it was moving in one direction or the other and the responsiveness. I can't recall details, but when we generate a visual like this you describe what's going on.
Q. Do you recall printing this particular map and discussing it with Mr. Handrick?
A. I don't know. It may have been printed off. I don't recall.
Q. Do you know how this particular map

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compares to the assembly districts that were finally adopted in Act 43?
A. No.
Q. If you go back then to the Spreadsheets File Detail Report.
MR. EARLE: Do you want to keep this one open?
MR. POLAND: Sorry?
MR. EARLE: Do you want to keep this one open?
MR. POLAND: Yes, please do keep that open. Thank you.
Q. (By Mr. Poland) Next is -- I would like you to look at Row Number 20. Actually, you know what? While we've got that one open, let's jump all the way down to 32.
A. From the spreadsheet?
Q. On the spreadsheet, yeah.
MR. KEENAN: Which spreadsheet?
MR. POLAND: This is the external -- this is the WRK 32586 External HD Responses Spreadsheets File Detail Report.
Q. (By Mr. Poland) And so if we go down to Row 32 you'll see there is a file with a file path that says Composite Joe --

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Composite_Joe_Base_Curve.xlsx. Do you see that?
A. Yes.
Q. All right. And if you scroll over to the right under Author, it's Column H, you'll see that you're identified as the author, correct?
A. Yes.
Q. And last saved by Adam Foltz, correct?
A. Yes.
Q. And created on May 28, 2011, right?
A. Yes.
Q. All right. So I would like you to open that one up and let's have that one open next to the Joe Assertive Curve.
A. I'm going to take a moment and --
Q. Reorient them?
A. -- reorient these so that we can draw some --
Q. Do you know how to make it so you can split the screen?
A. Yeah.
Q. Okay.
A. These were created on a Mac. So that's why it says Ronald Keith Gaddie CAS

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build, just to clarify. That will save us a question later. I'm sorry, I didn't mean that smarmy.
Q. No, no, no. No offense taken.
A. You know, I'll say after the many, many days we spent doing this before I think we -- okay. We can actually do it this way and it will serve our purpose. That was not it, no.
MR. EARLE: Yeah, if you just pull it down there on the screen.
THE WITNESS: We're almost there, Counselor.
A. I'm trying to figure out why they're not scaling the same way. Okay. This is good enough for us to go. Okay, Counselor.
Q. (By Mr. Poland) Okay. You have both of the spreadsheets open, the Joe Base Curve and the Joe Assertive Curve?
A. Yes.
Q. All right. Do you recall ever having these two files open next to each other and looking at them next to each other?
A. I don't. I mean, it's possible, but I don't recall having them open next to each other.

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Q. Okay. What does the Joe -- how does the Joe Assertive Curve compare to the Joe Base Curve?
A. Okay. Well, if we look at the Joe Base Curve, we've got actually a fairly steady almost 45 degree line running through the 50/50 mark in the district. So at district 50 -- rather at the 50th district in the rank order and at the 50% vote, they appear to intersect. The share of competitive districts actually appears to remain in similar balance, although there were more Democratic competitive districts on the base map than there are on the assertive curve. But unlike in the base map, the number of competitive districts continue forward as the partisan balance in the state moves more heavily Republican.
The only other difference is that there is a more rapid shift in terms of safe districts for the Republicans that occurs at what appears to be about 53% of the votes statewide, and it doesn't occur until about 54 or 55% of the vote on the baseline map. So there is some shift in the skew of the map between the base map and the assertive curve.

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Q. Okay. And again, you don't know -- these are for assembly districts, correct?
A. These are for the assembly districts, yes.
Q. And you don't know how the maps that are portrayed in these particular S curves, how they relate to what eventually was adopted in Act 43?
A. I don't know if these were implemented or not.
Q. Did you ever have any discussions with Mr. Handrick where you talked about the comparison between the assertive curve and the base map?
A. I'm trying to recall if I did or not. Again, Doug, it's been four years.
Q. I understand. I would like to go back then to the File Detail Report Spreadsheet.
MR. EARLE: Do you want to keep these open?
MR. POLAND: No, you can close those.
MR. EARLE: Okay.
Q. (By Mr. Poland) And I think that the last one that I wanted to look at on this, I think -- let's see. If you look in Row Number

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20, this is the team map curve.xlsx.
A. Uh-huh.
Q. And if you scroll over to Author you'll see again you were the author.
A. Right.
Q. And then you will see it was last saved by Adam Foltz.
A. Yes.
Q. And the date there June 14, 2011, correct?
A. Correct.
Q. Again, that coincides with the time that you were in Madison, correct?
A. That's correct.
Q. Let's open up that -- well, actually, before we do that, do you remember -- well, strike that.
Do you know whether the name "team map curve" has any significance?
A. Again, it's a vague recollection, but I would assume this would be a final version of a map that was agreed to by the mapmakers.
Q. So let's --
A. I don't know. But if I recollect, then that would be the case.

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Q. So let's open that one up.
MR. EARLE: Where did you find that? You have good eyes.
MR. POLAND: Where did you find it?
MR. EARLE: Down about two-thirds.
MR. POLAND: They might be arranged differently in there. There we go. There it is. Yeah, team map curve.
Q. (By Mr. Poland) Okay. Do you have that up in front of you then?
A. Yes, I do.
Q. All right. Does this refresh your recollection at all about what "team map curve" may be referring to?
A. It doesn't do anything to refresh my recollection beyond what I've said previously. But given the timing of the map and the nature of the process, I would assume this would be a map that they would have arrived at, yeah.
Q. And this is for the assembly districts, correct?
A. Yes, it is.
Q. Can you make a comparison between the Team Map Curve and then the Joe Base Map Curve that we just looked at?

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A. The Base Map Curve?
Q. Yes.
A. Okay. Well, we're going to need to pull the Base Map Curve back up. Actually, if you'll just go File, Open and reset it. It should be up there.
MR. EARLE: Base Map Curve. I'm sorry. There you go. Do you want me to make it smaller?
THE WITNESS: If you don't mind. There it is.
Q. (By Mr. Poland) And let me know when you've got them both on the screen where you can view them.
A. All right, Doug. We're ready.
Q. Okay. How does the Team Map Curve compare to the Joe Base Curve?
A. Again, the Team Map Curve again preserves a large range of competitive districts when the map is near 50 -- when the state is divided nearly 50/50. It maintains the existence of competitive districts across both parties as the partisan balance shifts right or left as close to the base map where the Democratic districts and also the

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Republican districts tend to narrow in terms of the number of competitive seats available. And again, at 53% it appears that there is an uptick in the shift of safe districts towards the Republicans.
Q. Is the Team Map Curve a more pro Republican map than a pro Democrat map?
A. Let me look at it for a minute. Okay. At 50% of the expected vote statewide, of the 99 assembly districts it appears that 55 of them are either safely or leaning Republican with 21 of those seats being competitive Republican districts. At 53% Republican statewide vote of the 99 assembly districts, 46 of them appear to be districts that we would term safely Republican based upon the estimate. So there is a Republican lean in this map, yes.
Q. And do you know how the -- can you compare the team map to the Joe aggressive or Joe assertive, I should say?
A. I'm going to need to open it back up, so bear with me just a moment. Counselor, give me just a moment.
Q. Absolutely.
A. I'm orienting to be able to see.

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Okay. The team map -- again, this is an ocular test, an ocular examination. And we've got some scaling issues with regard to the size of the cells, so I'm trying to correct for that.
The team map is not quite as aggressive in creating safe Republican seats as the assertive curve map was. One of the things we take note of -- again, as I eyeball this -- is you don't get to having a majority of safe Republican seats under the map until you get to 54% statewide vote. And that has reached a 52% statewide vote under the assertive map. There is also a wider band of competitive districts at 51% Republican statewide as compared to the assertive curve.
So the assertive map, the Joe Assertive Curve Map, is more Republican in terms of the district, distribution and competitiveness than the team map in looking at these two visuals.
Q. Okay. And again, you don't know which of these ultimately was reflected -- or if either of them reflected the final map in Act 43 for the assembly districts?
A. I don't recall. As I indicated, by

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this point most of my effort was on the majority/minority districts.
Q. Right.
A. All my effort was on the majority/minority districts at this point.
Q. Okay. So I would like you now to go to the last of the files that we have, the WRK 32586.
A. Okay.
Q. And let's take a look at the Responsive Spreadsheets File Detail Report.
MR. EARLE: For the external hard drive?
MR. POLAND: No, this is for 32586.
MR. EARLE: Okay.
MR. POLAND: And let me know when you're there.
MR. EARLE: We're there.
Q. (By Mr. Poland) I would like you to look at rows 6 through 13. And do you see those have file names that are somewhat similar to what we just looked at?
A. Yes.
Q. There's an Adam Assertive Curve, a Composite Current Curve, a Joe Assertive Curve

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and a Joe Base Curve, correct?
A. Yes.
Q. Do those names hold any significance for you?
A. I assume that Adam is Mr. Foltz and that Joe is Mr. Handrick.
Q. All right. And Mr. Foltz, again, is the legislative aide for the assembly in the redistricting process, correct?
A. I believe so, yes.
Q. If you scroll over to the right, over to the author, you'll see that you are the author of each of these files that are identified in rows 6 through 13, correct?
A. That's correct.
Q. And it indicates they were last saved by Adam Foltz?
A. That is correct.
Q. And that was on May 28, 2011 when you were in Madison, correct?
A. Yes.
Q. And then let's go down a little bit further, down to rows 33 through 36. And again you see we have a Team Map Curve?
A. Yes.

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Q. And if you scroll over to the right you'll see that you're listed as the author. And again, they were last saved by Mr. Foltz?
A. That's correct.
Q. And that was on June 14, 2011?
A. Yes.
Q. And then if you go down to rows 40 and 41 you'll see Wisconsin Correlates as a file name?
A. Yes.
Q. And CAS build as the author. And that was you as well, correct?
A. Yes.
Q. And Mr. Foltz is the one who last saved them?
A. Yes.
Q. And those were created on April 15, 2011, right?
A. That's correct.
Q. I would like to take you up to a different file. I would like to take you up to Row 20. And this is a planned comparisons -- I'm sorry, Planned Comparisons.xlsm. Do you see that?
A. Yes.

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Q. Let's go ahead and open that one up.
MR. EARLE: That's xlsm?
MR. POLAND: Correct. Correct. I've got some printouts for this one.
Q. (By Mr. Poland) By the way, I know that there are some file extensions that are xlsm and some that are xlsx. Do you know what the difference is between those?
A. I have no idea.
Q. You know, I've got some printouts of these things, too. So we can mark them.
MR. KEENAN: She said lunch is here.
MR. POLAND: Oh, it's here? Let's break then.
THE WITNESS: Sure. Okay.
MR. POLAND: This would be a good place to break.
THE VIDEOGRAPHER: Going off the record. The time is 1:19 p.m.
(Recess.)
THE VIDEOGRAPHER: We're back on the record. The time is now 1:42 p.m.
(Exhibit No. 39 marked.)
Q. (By Mr. Poland) Dr. Gaddie, just before we broke for lunch I had asked you to

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take a look at a spreadsheet that is identified on the WRK 32586 Responsive Spreadsheets File Detail Report.
A. Yes.
Q. On Line Number 20, the file name is Planned Comparison.xlsm. Do you see that?
MR. EARLE: Oh, you're on the spreadsheet. I'm sorry.
A. Yeah, we're on it.
Q. (By Mr. Poland) Okay. You're on it. And if you scroll over to the right, do you see that it was authored by Adam Foltz?
A. Yes.
Q. And it was authored on --
MR. EARLE: 5/2.
Q. (By Mr. Poland) -- 5/2. Yeah, it was created on 5/2. There is -- it looks like there are a couple of different -- it says office created date. It's got 5/2. If you scroll back over to the left you'll see it has a created and it says central and it says 5/9/2011. And I'm just saying this for the record.
A. No, I understand.
Q. Okay. I'm just trying to orient

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myself here.
MR. EARLE: Now I see.
MR. POLAND: Do you see what I'm talking about?
MR. EARLE: Uh-huh.
Q. (By Mr. Poland) All right. So I would like to ask you some questions about this particular spreadsheet. I've actually printed some copies. We've printed some copies of this one up and maybe that will save us the problem of having to pull it up on the screen.
MR. EARLE: Do you want to correct the error on the red writing?
MR. POLAND: Yes, I will.
Q. (By Mr. Poland) I'm handing you an 11 by 17 printout of it. Unfortunately, the rest of us are going to have to look at something a little bit smaller. Hopefully our eyes are up to the challenge.
So Dr. Gaddie, in front of you we've put a printout of the spreadsheet we were just discussing. Written in red at the top of the Page 1 of Exhibit 39 you'll see it identifies the file name, Plan Comparisons.xlsm. Do you see that?

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A. Yes.
Q. The next line says created -- handwritten in "created 5/9/11, 5:39 p.m." Do you see that?
A. Yes.
Q. And that corresponds to Column C on the Responsive Spreadsheets File Detail Report that we were just going through.
A. Do you need me to confirm that?
Q. No, I don't need you to. This is just for all of our reference.
A. Very good.
Q. And then below that it says "accessed." And on the copy that everybody had written in red it said 4/27/11. That was our mistake. It should actually be 4/27/12. And again, that's in the accessed -- that's Column D of the spreadsheet. And then just below that it says "modified." And we had handwritten in 4/27/11. Again, that's wrong. That should be 4/27/12. So we've corrected that in the blue in the top.
A. Very good.
Q. I just wanted to make that clear.
A. Thank you.

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Q. I would like for you to look at the very first page of Exhibit 39. And up at the top there's a table and it says MilwaukeeGaddie_4_16_11_V1_B. Do you see that?
A. Yes.
Q. All right. Does that particular file name have any significance for you?
A. No.
Q. All right. And again, this is a spreadsheet that we saw that Adam Foltz had created.
A. Yes.
Q. And we have assembly districts on the left and senate districts on the right, correct?
A. Yes.
Q. Is there a particular name that you would give to a file that appears like this or looks like this?
A. Well, again, I would have to be interpreting into it. And again, I'm working without memory from Wisconsin. But in eyeballing this, I would assume that "Milwaukee" means that there's a separate breakdown for the districts that are in

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Milwaukee County, although I cannot be certain of that.
"Gaddie," I would assume that they are using the measure for partisanship that I had developed for them to index and that's what's being indicated in the current and new columns on percentage. 4/16/11, I don't know. That could be a date. That could be April 16, 2011. V1 could be Version 1. B could be an update to Version 1, so it would be a subsequent update of the initial version of the table that was created.
But again, I'm just interpreting from the data. I don't know that to be the case.
Q. When you were working as a consultant to or with Mr. Ottman and Mr. Foltz and Handrick, did they ever show you any kind of a spreadsheet that looked like this?
A. I may have seen something like this, yes.
Q. Do you specifically recall that?
A. I don't specifically recall it, but you encounter data like this all the time doing this work.
Q. I would like you to look down. There

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are two boxes in the bottom. You'll see one that says Current Map and then one says New Map. Do you see that?
A. Yes.
Q. And so let's look under the box that says current map. Do you see it says "Safe GOP 55% plus," and then it's got "Assembly 27" and "Senate 7." Do you see that?
A. Yes.
Q. And then just below it says, "Lean GOP 52.1 to 54.9%. Assembly 13, Senate 8." And then below that, "Total GOP seats" and then in parentheses it says, "Safe plus lean" and it has 40 of 15. Do you see that?
A. Yes.
Q. What is that measuring?
A. Okay. This actually -- this is helping me get a recollection. There are a variety of ways of categorizing a legislative district. There are safe districts. There are leaning districts. There are swing districts.
And again, I'm reaching into the recesses of conversation, but I suspect that Mr. Foltz and I probably had a conversation about how would you characterize these data to

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take them down to a manageable scale for people to understand the impact. And one way of doing this -- and we've done this with litigation as well and in political science scholarship. Safe districts were routinely characterized as districts that are over 55% for one party or the other. Lean districts are the districts that are above 50% but below 55%.
Because of the potential for -- one of the other things we know from political science research is districts that fall in a 51, 49, 52, 48 range are often the most competitive. So a breakout like this allows you a shorthand for understanding the districts that are safe, districts that have the potential to be competitive but lean towards one party, and then those districts that are truly in play, truly competitive districts, those that are in the 48 to 52% range in the case of this table. So that's what's being told here.
Q. Okay. Now, just below what we had looked at with the safe GOP, lean GOP and total GOP, you get into -- just below that it says, "Swing 48 to 52%" and then it says, "Assembly 19. Senate 5." Do you see that?

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A. Yes.
Q. All right. And again, what does the "swing" correspond to?
A. These would be districts where the estimate from the regression model put the partisan -- the point estimate of the partisan vote somewhere between 48 and 52% of the vote let's say for the Republican party. Okay? And 19 corresponds to the number of districts in the assembly that fell in that range. Five corresponds to the number of districts in the senate that fell in that range for the current map.
Q. Okay. Were you asked specifically to look at the number of swing districts?
A. I don't recall. I mean, you talk about these things when you talk about districts. How can you categorize information to present it to the decision makers. There was doubtlessly a conversation about this.
Q. Have you ever heard the term swing analysis before?
A. Yeah.
Q. All right. Were you asked to perform a swing analysis as part of your work in the

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2011 redistricting?
A. The closest you'll see to a swing analysis is the curve maps that we just looked at. That's representation of how a swing might occur, but it's not a formal swing analysis, no.
Q. What would you have to do to undertake a formal swing analysis that wasn't represented in the S curves that you --
A. Well, it's --
Q. -- created?
A. Doug, we just did it there. It took us five hours, but I just talked over you. Ask the question again, please. I'm sorry.
Q. I'm sorry. What would you -- to do a full swing analysis, what will you have to do above and beyond the S curves that you generated?
A. Well, what you would do is -- part of what you would do with the swing analysis is you would actually have a graphic representation of the curve off of the model. So at 50% of the votes we expect to see how many seats for one party or the other. As we increase the skew of the votes state wide for

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one party or the other, how do the number of seats that you retain, how do they gain. You might model this off of different models. You might use reconstituted elections to see if there are sensitivities. And then you would graphically plot it. And one of the comparisons you might make is to compare that against a variety of different curves. A straight 45 degree curve, an S curve.
What you're looking -- and, again, it's been years since I've messed with something like that. But a swing analysis, what you're doing is you're looking for -- you're looking for responsiveness. Okay? And you're looking for -- well, you're looking for responsiveness and then you're looking for also skew outside the range of what you might expect given the ordinary bias of a single member district system.
Q. Do your S curves at all provide any information on the durability of the districts over time?
A. No.
Q. So back to Exhibit Number 39.
A. Yes.

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Q. Then at the bottom we see in the same box that we're in, Current Map, we see a lean dem, a safe dem and then total dem seats, right?
A. Yes.
Q. All right. Now, there is a box right next to it that says New Map. Do you see that?
A. Yes.
Q. And then there are also protections. And it looks like in New Map we've got the number of safe GOP seats are increasing from 27 to 34. In the senate from seven to ten. Lean GOP they're going up 13 to 18 and the senate is staying the same. So the total GOP seats, safe plus lean, are increasing from 40 to 52 and 15 to 18. Do you see that?
A. Yes.
Q. All right. Do you have any knowledge about whether the -- that kind of analysis was employed in creating what became the final map for Act 43?
A. That kind of analysis? What kind of analysis?
Q. I'm sorry. The analysis looking at the safe, lean and then total GOP seats from a

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current map to a new map.
A. I don't know if it was employed or not, but certainly the analysis was available.
Q. And as reflected on Exhibit 39?
A. Yes.
Q. And so when we look at dems under New Map, we see that from the Current Map to the New Map, the lean dem seats decrease from seven to six in the assembly and from three to two in the senate. And the safe dem decreased from 33 to 32 in the assembly and actually go up by one in the senate, correct?
A. Correct.
Q. And so we see a total dem seats decreasing from 40 to 38 in the assembly and staying the same in the senate, right?
A. Yes.
Q. Would you turn to the second page of Exhibit 39, please?
A. Yes.
Q. Up at the top we have what appears to be a file name or at least a header that says Statewide2_Milwaukee_Gaddie and then the same _4_16_11_V1_B. Do you see that file?
A. Yes.

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Q. And again, does that have any meaning to you?
A. Other than what I might infer that I described previously that it's a set of terms designed to identify elements and inputs in the map and the timing of the map.
Q. Okay. So if we look at the -- actually, if you would turn to the third page then.
A. Sure.
Q. And you see up at the top it says Final Map?
A. Yes.
Q. Do you have any information as to whether this reflects the final map that was enacted in Act 43?
A. No.
Q. Again, we see the same kind of analysis as we did in the previous two pages, correct?
A. Yes.
Q. All right. If we compare the number of seats, the total GOP seats, safe plus lean, in what's identified as the Final Map, we see it's 52 in the assembly and 17 in the senate,

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correct?
A. Yes.
Q. And then we've got Swing, we've got ten. Or New Swing it says. We've got ten in the assembly, three in the senate, right? And then the total dem seats, strong plus lean, we've got 37 in the assembly and 13 in the senate, correct?
A. Yes.
Q. All right. And then I think we must have just gotten two copies of the same page there in the Final Map.
A. Yeah.
Q. And then the last page of this says Custom Map. Do you see that?
A. Yes.
Q. Does that have any meaning to you at all?
A. Well, I recall -- I mean, I recall from the 2002 redistricting the Kessler map from it. I'm trying to remember if there was a Kessler map presented in the most recent litigation or not. I don't recall. But I would assume that this represents an alternative map presented by a different

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litigant or a different stakeholder in the process.
Q. Okay. Now, this, at least according to the metadata, this is created in 2011, correct?
A. I'm on paper.
Q. Oh, yes. I'm sorry. We looked at the file. We have looked in the file. So we looked at the metadata.
MR. EARLE: Let me go back to it.
A. Yes.
Q. (By Mr. Poland) All right. And so if we -- the Baldus litigation hadn't actually started yet in May of 2011, correct?
A. Yes. I think that's right, yeah.
Q. If you look at on the page that has Kessler Map at the top, if you look under Current Map, the Kessler Map has total GOP seats in the assembly at 40 and total dem seats in the assembly at 40 as well, correct?
A. Yes.
Q. And swing is 19?
A. Yes.
Q. And then in the senate, again under Current Map, there are -- the total GOP seats

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are 15 in the senate, 13 total dem seats in the senate with five swing, correct?
A. Yes.
Q. And if you go to New Map, those numbers change as indicated in the box at the bottom, correct?
A. Correct.
Q. Any map that you ever saw were you ever asked to do any kind of analysis on a Kessler Map?
A. None that I can recall.
Q. Let's go ahead and mark this. I've got big ones for everybody. Let's mark this as -- are we on 40 now?
THE REPORTER: Yes.
(Exhibit No. 40 marked.)
Q. And let's mark this one that we can actually read as Exhibit 41.
(Exhibit No. 41 marked.)
Q. Dr. Gaddie, let's start with Exhibit Number 40. That's the smaller of the two sheets. Do you have that in front of you?
A. All I have is Exhibit 41.
Q. Oh, I'm sorry. I asked the court reporter to hold on to it.

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A. Thank you.
Q. My apologies. We've handed you two documents, one has been marked Exhibit 40 and one is 41. I would like you to look at Exhibit 40 first.
A. Okay.
Q. All right. And do you see that Exhibit Number 40 was marked as an exhibit in your deposition in 2012?
A. Yes.
Q. All right. Do you recall being questioned about Exhibit 40?
A. I don't recall, but -- I don't recall, but I must have.
Q. Okay. Now I'm going to ask you to look at Exhibit Number 41.
A. Right.
Q. And do you see that both Exhibit Number 40 and Exhibit Number 41 in the lower right-hand corner say -- they've got a Bates number, Foltz 001065?
A. Yes.
Q. All right. So Exhibit 41 is just a much, much more legible copy of Exhibit 40, isn't it?

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A. Yes.
Q. All right. You can set Exhibit 40 to the side. We won't try to worry about looking at that.
If you look up at the top of Exhibit Number 41.
A. Yes.
Q. Do you see that the heading for Exhibit Number 41 is the same as the heading at the top of Exhibit 39, correct?
A. Yes.
Q. So that's the Milwaukee Gaddie 41611 V1 B, correct?
A. Yes.
Q. Now, there's some extra data that's presented in Exhibit 41 that does not appear in that first page of Exhibit 39, correct?
A. Yes.
Q. So if you look up at the top you'll see 2002, 2004, 2006, 2008, 2010. Do you see that?
A. Yes.
Q. All right. What do those numbers indicate?
A. Okay. Those are earmarkers at the top

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of the column headers.
Q. Uh-huh. Okay.
A. Shall I continue?
Q. Please do.
A. Okay. And what's being indicated here is the prevailing party in these districts in these given years go with a letter indicating the party and then color coded. And then the final column is indication of the number of election cycles in the previous redistricting in the previous decade, whether that district went Democrat or Republican -- went Republican.
Q. Do you know why that particular -- the analysis of those years was included in Exhibit 41?
A. No, but I'm pretty sure that I -- this looks like something I actually would have compiled or would have put together out of data. This looks like something I would have put together. I don't know if I did or not. But one of the things that you do get curious about is, is there a trend or a transition going on in the district. And this was one way of illustrating that. Is there reactivity in the existing districts.

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Q. Is this part of the work that you did to help build a partisan score for the assembly districts?
A. In terms of building a partisan score, no. In terms of building a partisan history, yes. Again, I don't recall specifically doing this, but this looks like the kind of thing I've done in the past. So I may have assembled this. I have had input on it. I certainly recognize it.
Q. The last column in the chart there, in the table, it says Cycles GOP. Do you see that?
A. Yes.
Q. Do you know why cycles -- what does that indicate?
A. Just indicates the number of elections out of five that a Republican had prevailed in the election.
Q. Got it. Because there are five elections that are represented in the cycle?
A. Exactly.
Q. All right. I see. Why would you have included that in this table?
A. Again, we're just attempting to

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summarize information about the district histories.
Q. Do you recall whether anybody asked you to put together this kind of an analysis?
A. I don't recall.
Q. Do you recall ever discussing this kind an of analysis with anyone?
A. I'm sure that we chatted about this among the folks that were -- between Joe and Tad and Adam, I'm sure we at least went over this or looked at it, but I don't recall any in-depth conversations about it.
Q. From what we saw in Exhibit 39, it does appear that that analysis was included in some additional work that at least Mr. Foltz compiled, correct?
A. It looks that way, yes.
Q. Having seen Exhibit Number 41, does that refresh your recollection at all with respect to any of the other spreadsheets that are included on Exhibit 39 or the tabs of that spreadsheet?
MR. EARLE: Here it is.
A. Not especially, no. I mean, this is --

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Q. (By Mr. Poland) Again, this time frame, this 4/16/11, that's within the time frame that you were in Madison, correct?
A. Yes.
(Exhibit No. 42 marked.)
Q. Dr. Gaddie the court reporter is handing you a document that's been marked as Exhibit Number 42.
A. Yeah.
Q. A document that I know that you've seen before, but please take a minute to look at it.
A. Yes.
Q. Do you recognize Exhibit Number 42?
A. Yes.
Q. Can you identify it for the record, please?
A. It appears to be an e-mail from me dated April 20 of 2011.
Q. All right. And this is a document that was marked at Exhibit 67 in your 2012 deposition, wasn't it?
A. Yes.
Q. All right. Now, the dates are a little bit difficult to follow here. I wasn't

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quite able to make much sense of them. At the top of the first page you'll see there's a date that says Wednesday, April 20, 2011, at 7:34 a.m. Do you see that on the right-hand side?
A. Yes.
Q. All right. And that's -- that corresponds with an e-mail from Mr. Handrick to Adam Foltz and Tad Ottman that says "See Keith's comments below," correct?
A. Yes.
Q. All right. Now, just below that is an e-mail from you to Joe Minocqua, who is Joe Handrick, correct?
A. Right.
Q. And that's also April 20, correct?
A. Yes.
Q. Now, it says 3:47:20. Is that 3:47 a.m. or p.m., do you know?
A. I would assume it would be a.m.
Q. All right. Now, April 20, you weren't still in Madison, were you?
A. No. It's my wife's birthday.
Q. In that e-mail, you say, "Hey, Joe, I went ahead and ran the regression models for 2006, 2008 and 2010 to generate open seat

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estimates on all the precincts." Do you see that?
A. Yes.
Q. All right. Now, do you know why you went ahead and ran the regression models for those years?
A. I don't recall why. Again, as I indicated before, more recent data are more instructive than older data in understanding the near future and measuring partisanship. So working with most recent data first.
Q. Okay. Now --
A. But beyond that, I don't recall.
Q. Sorry. I did it that time.
Your sentence says, "Ran the regression models," and there's a plural there. Do you see that?
A. Yes.
Q. All right. Actually, was there more than one regression model that you were working with?
A. Well, it would have been the same model run on different years, because part of what you're doing when you generate a model to understand the near future is you don't work

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with data.
Okay. Let's suppose we want to create a model to understand district performance next year. Okay? We're going to use data up to this point in time to do that. But let's suppose we wanted to understand how a measure would work four years ago. We would use information up to that point in time but not in that year or afterwards. We can't use the future to explain the -- to predict the past or explain the past. So you use data up to 2006 to model 2006, up to 2008 to model 2008, up to 2010 to model 2010.
Open seat estimates. Again, you'll recall when we talked about the point estimates of an expected vote in a district, because we've netted out a control for incumbency, it's an open seat estimate because that's what we're curious about is how will a district look absent the presence of an incumbent.
And what I did is -- and again I'm recalling from the past -- is generated the open seat estimates from the regression, take that vote and then correlate it against the composite that had been developed. And the

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composite would have been -- again I'm digging into deep recesses here, Doug. This is probably some effort to composite or average the previous -- the previous statewide votes for statewide offices and then to see how well they correlate. And we're indicating they're correlating at a .93 level.

So if somebody says, why don't you just look at the Governor's race. Well, this model has a strong relationship in forecasting what this election should have looked like. So basically what we're doing is we're trying to generate models up to different points in time and then estimate their relationship to votes later on.

Q. You're e-mailing Mr. Handrick here. Is that something that you would expect Mr. Handrick to understand when you're e-mailing this to him?

A. Yeah, Joe would understand. I think so.

Q. Okay.

A. I'm not sure if Joe understands -- I don't know how keen Joe is on the regressions, but if I tell Joe that we've got a regression

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analysis that has a very high level of correlation to a composite he had been developing for his own purposes, what I'm communicating there is if you want to look at your composite for your own purposes to understand the map, it's a good proxy.

Q. All right.

A. And then I think I actually used that term in here.

Q. I was about to say, the next paragraph down, if you read it, you say, "At this point, if you asked me, the power of the relationships indicates that the partisanship proxy you are using (all races) is an almost perfect proxy for the open seat vote and best proxy you'll come up with."

A. Yeah.

Q. And so what did you mean when you used -- when you made that statement?

A. Well, the actual open seat vote would be the vote in a district if it were open. You know, proxy measures are substitute measures we use absent an actual measure. So what I'm saying there is if you have this partisanship measure you've developed and I've tested it

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against what we would expect the open seat vote to look like, there's such a strong relationship between the two values. Without having to go through the purpose of doing all the stuff with the equation, generating estimates, if you want to rely on your proxy as your own vehicle or measure, you can do that.

What I'm saying is his proxy had a high degree of predicted validity when compared to a more sophisticated statistical model.

Q. And where you say -- you've got all races in parentheses there. That's the proxy, the partisanship proxy that Joe is using?

A. Yeah.

Q. What is the all races? Is that a --

A. I'm trying to recall. You would have to ask Joe.

Q. Okay. Below that you say, "This seems to pretty much wraps (sic) up the partisanship measure debate."

A. Yeah.

Q. What was the debate about?

A. Do we need the regression equation or can we use proxy measures?

Q. Got it. All right. You were a fan of

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the regression, is that right?

A. I'm a fan of the regression, yeah. I think whenever you can get more leverage, more information on a problem, you ought to use it.

Q. All right. And Mr. Handrick was looking for a proxy?

A. I don't remember. You know, we had talked about how can you measure this. There was the measure, again as I indicated before, that Judge Easterbrook preferred from previous litigation. We wanted to make every -- in fact, Judge Easterbrook had pointedly rejected a proxy election approach in his May 2002 -- in the May 2002 decision.

You know, if you were going to litigate over this and have to talk about how you measured partisanship, best to give the judge what he likes rather than what we know he doesn't. Right? So this is an effort to comply with the expectation of the court if it ever got there. That was my argument, was, let's go ahead and do what we're going to end up having to do anyway if we have to.

Q. Okay. And if you jump down then to the next sentence it says, "Have Jim call me if

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he needs anything."
A. Yeah.
Q. Is that Mr. Troupis?
A. It is.
Q. All right. And then you say, "Otherwise, I'll be tweaking the polarization analysis." Do you see that?
A. Yes.
Q. What was the tweaking that you were going to be doing of the polarization analysis?
A. Well, tweaking in this sense just means I'm going to be trying to get a handle on the racial polarization analysis for the Black and the Latino districts in Milwaukee.
You'll recall from the previous litigation, getting a handle on those Hispanic districts was very difficult because we couldn't -- I was having a hard time estimating a stable turnout model to get a sense of what would constitute a performing Hispanic district. So that's what I was messing with there, was trying to get a handle on the -- the measure of polarized voting in Milwaukee County.
Q. Okay. Kind of jumping at this point

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from partisanship analysis over to the polarization analysis, or at least immediately?
A. Yeah.
Q. And just below that e-mail, and it looks like this predates your e-mail to Mr. Gaddie, but -- or Mr. Handrick, Mr. Handrick sent you an e-mail on April 19 where he said -- the subject is Milwaukee County elections and he says, "We looked at the different combos today."
A. Yeah.
Q. And then if you go back to the second page it says, "The 2006 and 2010 races combined too much to the GOP."
And then the next paragraph down he says, "I had Tad do a composite with the 2006 and 2010 state races and all the federal races from '04 to 2010. In other words, all statewide races from '04 to 2010."
A. Yes.
Q. "This seems to work well both in absolute terms as well as seats in relation to each other." Do you see that?
A. Yes.
Q. Does that give you any more

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information about what he might have meant or you might have meant when you said "all races" on the first page?
A. I can't say for sure, Doug. I mean, it's -- let me read this again.
Doug, I just can't recall. I don't know.
Q. Okay. Does it appear that Mr. Handrick's e-mail to you on April 19 is really addressing this issue of trying to create a proxy as opposed to having to rely on the regressions?
A. It could be. That's entirely possible.
Q. All right. The last thing I want to ask you about this document is, the e-mail directly below that is from you to Joe on April 20. And you say, "I am close to having a partisan baselining for you." Do you see that?
A. Yeah.
Q. Do you remember specifically at that time working on a partisan baselining for Mr. Handrick?
A. I would assume. I'm talking about trying to make sure the regression equations

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work, so --
Q. All right. And what made me curious is you said "having a partisan baselining for you." Was there something specific that you were getting at there?
A. Just any measure that we could use to compare districts and compare performance across. Yeah, just any measure of partisan tendency for districts, a partisan baseline.
Q. We can set that one to the side. I wanted to go back and ask you questions about a couple of the spreadsheets that were on your drive that you produced to us last week. So why don't we pull that one up?
This is Exhibit Number 31, just for the record.
A. All right. Counsel, I think we're ready.
Q. Great. This is a file we looked at when we initially pulled up your flash drive. I would like to take a look at Wisconsin_1.xlsx.
A. Yes. All right, Counsel, I'm ready.
Q. Are you able to see the metadata on that particular document?

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A. No. Hang on. Let's see if we can -- where would I find that?
MR. EARLE: Under View, I think.
MR. POLAND: Well, actually, if you go under Edit you can find Properties.
MR. EARLE: Wait a second. Do you know how we can see that?
THE WITNESS: That's right. Go back to the --
MR. EARLE: I'll just shrink this.
THE WITNESS: Here we go. Yes.
Q. (By Mr. Poland) I'm sorry, its File Properties. I apologize. It's the file pull-down menu. Properties is the last one.
A. Okay.
Q. And do you see that it was created Sunday February -- I'm sorry. It was modified Thursday, April 14, 2011?
A. Yeah, I see that.
Q. Okay. It looks like the created metadata probably got a little bit messed up. So April 14 of 2011.
And can you see how far out the voting data or how recent the voting data is that's used to create this particular spreadsheet,

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this Wisconsin_1.xlsx?
A. Can I take a moment to review?
Q. Yes.
A. There are electoral data from 2002 to 2010 in this database.
Q. Okay. And then take a look at the spreadsheet that is Wisconsin Election Data.xlsx.
MR. EARLE: Leave this one open?
MR. POLAND: Yeah, leave it open.
Q. (By Mr. Poland) So it's Wisconsin_Election Data. It's just a few down, at least in my -- on my directory.
A. Right there.
MR. EARLE: Are you going to cover the metadata? You might want to do that before we click it.
MR. POLAND: Oh, before you open it? Oh, yeah. Okay.
MR. EARLE: Yeah.
Q. (By Mr. Poland) Can you tell me when this particular spreadsheet was created?
A. Well, the create date on it says February 21, 2016 also, but the modify is April 15, 2011.

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Q. So this seems to be a day -- make sure I've got this right. A day after the Wisconsin 1 xlsx, correct?
A. Yes.
Q. All right. Is the election data that is -- that appears in this particular spreadsheet, the more recent one, the Wisconsin election data.xlsx, different than in the Wisconsin 1 xlsx?
A. I don't know, Doug. These are two huge databases. They've got 6,000 wards in them and several hundred variables.
Q. Okay.
A. I don't know if they're different or not.
Q. If you go over -- if you scroll over to the right of the spreadsheets, does that tell you whether you've got more elections that are being analyzed or included in these spreadsheets?
A. In which file?
Q. In the second of the two, in the Wisconsin election data.xlsx.
A. There are more columns in the second database. So I don't know if this is more

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elections or just computations off of data that were already there. But there is a lot more data in the second file.
Q. Okay. I've got one other that I wanted to ask you about.
A. Yes.
Q. And that's Wisconsin election data rev 1 xlsx.
A. Okay.
Q. And so that's going to be just above it.
A. There we go.
Q. And I see we have to change the videotape. Why don't we do that while you're opening that?
A. That's fine.
THE VIDEOGRAPHER: Going off the record. The time is 2:26 p.m. End of Disc 3.
(Recess.)
THE VIDEOGRAPHER: We are back on the record. The time is 2:29 p.m.
Q. (By Mr. Poland) Dr. Gaddie, do you have Wisconsin election data rev 1 spreadsheet up in the computer in front of you now?
A. Yes.

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Q. I would like you to scroll over pretty far over to the right here in the end of the columns. You'll see four columns. There's a PC, PD, PE and PF columns.
A. Yes.
Q. Do you see that?
A. Yes.
Q. And you see the headings of those columns respective are 2010 statewide, 2010 plus '06 statewide, 2010 plus '06 plus '02 statewide, and then all fed '04-10. Do you see those?
A. Yes.
Q. What do those columns represent?
A. These are different efforts to index the voting district based upon statewide elections. The first one is a composite just built upon -- the PC is a composite built just upon the 2010 statewides.
PD is a composite built upon the 2010 and '06 statewides. So these are state constitutional offices. PE is based upon the '02, '06 and '10 statewides. And Column PF, I don't know if that is all of the statewides plus all the federal statewides or if it is

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just all the federal offices. It's one or the other. I don't know.
Q. Okay. I don't think -- I think I forgot to ask you about the metadata on this one. Do you have -- I won't ask you the created date, but the modified date, do you have a date on there?
A. Let's get to the proper forum. Just give us a moment.
MR. EARLE: I thought I had one over here. I'll just shrink it.
THE WITNESS: Yeah.
A. Okay. We've got a modified on it of April 15 at 3:47. The create date is February of this year.
Q. (By Mr. Poland) All right. If you actually go to the statistics tab. Do you see that there? And click on that.
Oh, you can't do that?
A. Can I just come over and look on yours?
Q. Oh, yeah, of course. Here, I can just slide it over.
Statistics, do you see who indicates it was last saved by?

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A. T-o-t-t-m-a-n. So that would be Mr. Ottman.
Q. Mr. Ottman?
A. Yeah.
Q. Okay. Now, the four columns that we had just looked at --
A. Yes.
Q. -- those PC through PF, those did not appear on the previous two spreadsheets we had looked at, correct, the Wisconsin 1 xlsx and Wisconsin election data.xlsx?
A. Yes.
Q. They did not?
A. They did not, yes. I'm agreeing with your statement, yes.
Q. Do you know why those were added? Why those four columns were added to this particular spreadsheet?
A. No.
Q. Did somebody ask that they be added to this spreadsheet?
A. I don't know.
Q. Do you know whether you added them?
A. I don't recall. I don't think I did.
Q. Is this -- do you know whether this

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particular spreadsheet, Wisconsin election data rev 1, is one that you used to build your regression model?
A. I had to have used -- I don't know if I used this exact spreadsheet. I had to use a spreadsheet like this to get at the data to do what I did. And I'll tell you there is -- the previous iteration of the spreadsheet has my fingerprints on it. And it goes to -- I'll just say it goes to columns OZPA and PB. These are factor analysis computations which were likely generated off of previous election data to ascertain if there was some kind of latent structure existing in the partisanship data that we could build an index out of. It didn't reveal anything meaningful, so I never used it.
Q. Okay.
A. But that's what those are. So the -- you know, there is original data in here that I have computed that my fingerprints were clearly on, and it's those three columns.
Q. Okay.
A. But I don't recall. The main reason I can say that I didn't add these four columns are these are not the types of devices I would

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have used for a column header.
Q. All right. Because this was on a spreadsheet that you produced to us --
A. Uh-huh.
Q. -- do you know why you would have had in your possession the spreadsheet that Mr. Ottman might have saved?
A. In an effort -- again, if you look back at the subsequent e-mail from five days after this, there's this effort to test the indices to the aggression equation against these types of indices. So that would be why I would have it in my possession.
Q. Got it.
A. Is that these data, while I did not generate them, I would have used these data as part of that exercise.
Q. Okay. Do you have any recollection of receiving a spreadsheet like this from Mr. Ottman?
A. I mean, I was in Madison. I probably did, yeah.
Q. Could have been Mr. Handrick or Mr. Foltz?
A. Yes.

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MR. POLAND: Let me take two minutes here.
THE VIDEOGRAPHER: Going off the record. The time is 2:35 p.m.
(Recess.)
THE VIDEOGRAPHER: We are back on the record. The time is 2:45 p.m.
Q. (By Mr. Poland) Dr. Gaddie, the court reporter has handed you a copy of a document that's been marked as Exhibit 43.
(Exhibit No. 43 marked.)
Q. Do you have that in front of you?
A. Yes, I do.
Q. And do you see that's a three-page document?
A. Yes.
Q. We just printed that from a spreadsheet, and we've got a copy of the spreadsheet in electronic format pulled up on the computer in front of you. Do you see that?
A. Yes.
Q. All right. So for the record, this is a file that has the name Plan Comparisons and it's in xlsm spreadsheet. Do you see that?
A. Yes.

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Q. I would like you to look at the metadata on the file on the computer.
A. Yes.
Q. Can you tell me when that one was created?
A. July 14, 2011, 1:32 p.m.
Q. Okay. And are you able to click on the statistics button there or can you not do that?
MR. EARLE: No, it will not do that.
MR. POLAND: It will not do that.
Okay.
Q. (By Mr. Poland) Then I will just ask you, can you see who created it?
A. Created? There's a last saved by.
Q. Or last saved by?
A. It says Tad.
Q. Okay. That would be Mr. Ottman?
A. I would assume, yes.
Q. Now, again, if you look at the spreadsheet on the computer you'll see down at the bottom there are three separate tabs. Do you see those?
A. Uh-huh.
Q. And one says Joe Aggressive, correct?

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A. Yes.
Q. One says Joe Aggressive 2, correct?
A. Yes.
Q. And one says Team Map 6/15/11. Do you see that?
A. Yes.
Q. June 15, 2011 is a time when you were in Madison, correct?
A. I believe so, yes.
Q. Do you recall ever seeing a map or talking with Mr. Handrick about a map called Joe Aggressive?
A. I can recall talking about it. I can recall the map name. I don't recall details of the conversation, but I do recall a map called Joe Aggressive, yes.
Q. And that's to be distinguished from the Joe Assertive that we'd seen earlier, correct?
A. I would assume, yes.
Q. And do you know -- this is pretty late stage in the process of the legislature adopting a map, correct?
A. I guess, yes. I don't recall.
Q. You don't recall when Act 43 was

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passed?
A. No.
Q. Let's take a look first at the tab that says Joe Aggressive.
A. Okay.
Q. As opposed to the Joe Aggressive 2.
MR. KEENAN: Doug, where can I find an electronic version of this?
MR. POLAND: Yeah, we're going to get into the printed stuff right now. I can give you an electronic one.
MR. KEENAN: Where did it come from, I guess?
MR. POLAND: This is one of the files that we got from Lanterman, although this is not --
MR. KEENAN: It was not in the --
MR. POLAND: It was not on that one, right, not on that flash drive. But I can provide those all to you, Brian.
MR. KEENAN: Okay. Thank you.
MR. POLAND: Absolutely.
MR. EARLE: It's an equivalent spreadsheet for Handrick and documents from Handrick's computer.

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MR. POLAND: Correct. Well, it was off one of those computers. There were three of them. Yeah, I'll give you an electronic copy. We can do it after we're done with the deposition.
Q. (By Mr. Poland) And I want to just orient us on the spreadsheet that's on the computer and then we can jump to the paper so everyone can see what we've got.
Under the Joe Aggressive tab, up at the top there's a header that says Team Map. Do you see that?
A. Yes.
Q. And if you look at the Current New and Delta for the assembly it's 51.5%, New 51.2%, Delta 0.07%. Do you see that?
A. Slow down.
Q. Sure.
A. Run that by me again.
Q. Yeah.
A. Are we at the top of the document?
Q. Correct.
A. Okay. I'm there. I'm there now. Yes, I'm good. I'm with you. Yes.
Q. I just want to try to orient us

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between the on-screen sheet and then what we have on the paper so I can ask you the questions based on the paper. All right?
A. Check.
Q. So the Joe Aggressive appears to be the first page of the printout in Exhibit 43, correct?
A. Yes.
Q. All right.
A. That appears to be the case, yes.
Q. And then if you click the next tab on the spreadsheet that's on your computer, you'll see Joe Aggressive 2.
A. Yes.
Q. Does that appear to correspond with the second page of the printout on Exhibit 43?
A. Yes, It does.
Q. And then if you go to the third tab that says Team Map 6/15/1, that appears to correspond to the third page of Exhibit 43, correct?
A. Yes.
Q. All right. Terrific. Let's move to the paper then so we can all follow along.
In format Exhibit 43 is very similar

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to the printout that we saw previously, correct? I'm trying to pull up the exhibit. With Exhibit 39, correct?
A. Let me get to Exhibit 39.
Q. Sure.
A. Yes. Similar. Not the same, but similar, yes.
Q. And when you say that it's not the same, why do you say that it's not the same?
A. Well, it's not identical.
Q. Well, they certainly are not identical. But in format they are --
A. Variations on the theme.
Q. Variations on the theme. That's fine. I'll go with that. All right. Now, if you -- well, strike that.
You don't know, do you, which of, if any of these three maps, are ones that were actually enacted by the Wisconsin legislature?
A. No.
Q. You recalled you testified before that you do remember Joe Aggressive being the name of a map that had been raised?
A. Yes.
Q. All right. What was a discussion that

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you had with Mr. Handrick about that?
A. I don't remember. I mean --
Q. And by Aggressive, was that an Aggressive Republican representation in the legislature?
A. I think that's a fair way of characterizing it, yes.
Q. All right. Was it in particular in the senate or the assembly or was it without regard to which of the two houses?
A. I don't know.
Q. Do you remember having any discussions with anyone other than Mr. Handrick about the maps that were called Aggressive maps?
A. Specific conversations, no. If we were discussing these maps we would have been at Michael Best in the mapping room. It would have been no more than myself and Adam and Tad. I mean, myself, Joe, Adam and Tad at most. So the discussion wouldn't have gone beyond those individuals.
Q. And so we did see from the metadata that -- or at least from one of the tabs said Team Map 6/15/11, it does seem like this is coming very late in the process, correct?

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A. Yes.
Q. And so this indicates that they're still looking at the partisanship makeup -- the partisan makeup of the maps, you know, as of the middle of June of 2011?
A. Appears so, yes.
Q. And they're using your regression analysis to do it, correct?
A. Again, I can't say definitively these are the regression numbers, but it looks like it would be yeah. I would assume that the regression analysis is involved, yeah.
MR. POLAND: Any more? I think that's going to do it for us.
THE WITNESS: Okay.
EXAMINATION
BY MR. KEENAN:
Q. Thank you for being here, Professor Gaddie. As I said before, I'm Brian Keenan representing the defendants. I'll just ask a few questions of you, too.
A. Okay.
MR. EARLE: Do you want the computer open?
MR. KEENAN: Yes, please keep the

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computer open and we'll go back to a few documents that we've looked at before.
Q. (By Mr. Keenan) Most of my questions are going to follow up on things that Mr. Poland has already been through.
I believe you just recently testified that -- we were looking at a spreadsheet and it had a column All Fed 04 10. Do you recall that?
A. Yes.
Q. And you said that was not a heading of data that you would have calculated?
A. Well, it's something I would have calculated, but it's not a header name that I would have used.
Q. Okay.
A. It just doesn't strike me as -- it doesn't look like the style of header that I would have created.
Q. Okay. So do you know if the numbers that were listed in that column heading were generated from your regression model?
A. Those numbers, if I'm recollecting correctly, would not have resulted from the regression analysis. It would have been

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reconstituted election data from the actual elections. So from the actual federal elections. So it's what we call a reconstituted election analysis.
Q. And just to be clear, it was not your regression model?
A. Right.
Q. Do you know if that column was equivalent to the partisan proxy that Mr. Ottman and Mr. Handrick had developed?
A. I don't recall.
Q. We were just looking at a couple of documents. One is Exhibit 43 which you could pull out and also exhibit -- was it 39, I think?
A. Yes.
Q. These spreadsheets that have the columns and they look similar. Looking at Exhibit 39 and Exhibit 43, for the column -- the assembly seats column and then looking at the column that's New, the new percentages. Do you see that?
A. Yes. Yes.
Q. Do you know whether the percentages that are listed in those columns are a result

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of your regression model?
A. I don't know for certain, no.
Q. And do you know whether those are a result of the partisan proxy model that was developed by Joe Handrick and Tad Ottman?
A. It's been four years. I don't know for certain.
Q. You just don't know one way or the other?
A. No.
Q. Okay. In your regression model -- we'll go back over this a little bit and correct me if I'm wrong. What was the dependent variable for your regression model?
A. The dependent variable would have been the vote share at the ward level for assembly or senate respectively, depending upon the map being analyzed.
Q. And you say "vote share." Were you calculating a percentage of the vote?
A. Yes.
Q. And was that a percentage of the two party or the total vote?
A. Should have been the two-party vote.
Q. So with the two-party vote, as I

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understand it, if you know, for example, if the Republican two-party vote is 45% and the Democratic two-party vote is 55% and that they both have to add up to 100?
A. Correct.
Q. Okay. What were the independent variables that went into your model?
A. As I recall -- and again, it's been four years -- there should have been a control for the incumbency in the district, Democrat or Republican. Okay? There should have been a control for a variety of statewide elections as inputs, previous gubernatorial races, secretary of state and so on and so forth. And the dependent variable is regressed onto all of those variables in order to create an equation to estimate partisanship in the district.
Q. So you looked at a variety of different statewide elections as independent variables?
A. Yes.
Q. And you also looked at a variety of statewide elections in different years as independent variables?
A. Yes.

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Q. Okay. Why didn't you just rely on the most recent year?
A. Because if you rely on the most recent year, it's possible it may be an outlier. For example, we had just come out of the landslide 2010 election. And if you were to baseline -- if you were to baseline expectations and competition based on Republican performance in Wisconsin in 2010 you probably would have gotten a more Republican skew than would normally exist in the state. I mean, this is the state that Scott Walker won, but Barack Obama also won twice. So relying only on 2010 wouldn't necessarily give you the best measure of partisanship.
You know, in fact, this is the problem with Wisconsin constantly, is that the mid term elections are often a little hinky. 2002 was not exactly normal either. So we don't want to rely on a single election cycle to baseline what's going to happen in a district.
Q. So in calculating a partisan baseline you would need to look at elections in a variety of different electoral conditions?
A. Yes.

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Q. At the time when you were serving as a consultant to the legislature in drawing the maps, had you ever heard of a concept called the efficiency gap?
(Cell phone interruption.)
THE WITNESS: That's my phone.
(Discussion off the record.)
Q. (By Mr. Keenan) Now we've had our interruption from the computer Hal --
A. Counsel, what was the question?
Q. During your time serving as a consultant to the legislature in drawing the maps, had you heard of a concept called the efficiency gap?
A. I mean, I'm aware what the efficiency gap is, but it's not something we were actually discussing. I'm aware of the term, yeah.
Q. Were you aware of it at the time you were doing the redistricting consultation?
A. It's sort of funny. The debate over efficiency gap really arises subsequent to this re-map and redistricting cycle. But I mean, you know, it's a concept that we're all aware of, this notion that distortions are created through redistricting and they create

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disparities in the translations of seats or votes. And that one hallmark of a partisan gerrymander might be the introduction of certain inefficiencies that end up in vote wastage for one party or the other.
Q. When you were serving as a consultant to the legislature did you calculate an unexpected efficiency gap for the assembly districts that were to be enacted?
A. No.
Q. When you were doing your regression model to predict the assembly vote share, did you assume that there would be equal turnout across all the districts in the Wisconsin assembly?
A. Because we're working with vote percentages within districts as a dependent variable rather than ballots cast, what we're doing is we're not assuming equal turnout across constituencies.
Q. If you could, open up -- go back to the computer here. And this is going to be on the -- what is my purple hard drive, the legislature spreadsheets from Mr. Lanterman, which is exhibit -- which exhibit is that?

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MR. POLAND: 37, I think. Let's double check and make sure.
Q. (By Mr. Keenan) And we can go into the folder that is --
MR. EARLE: Give me a second here.
MR. POLAND: Yeah, 37.
MR. EARLE: But this one is not marked, Doug?
MR. POLAND: Huh?
MR. EARLE: This one is not marked?
MR. POLAND: No, it's not marked.
MR. EARLE: I'll give it back to you. Which folder?
MR. KEENAN: WRK 32586.
MR. EARLE: Okay.
MR. KEENAN: And then we can go into the subfolder Responsive Spreadsheets.
MR. POLAND: File Detail Report, Brian?
MR. KEENAN: No, just the subfolder and then we'll go into some of the individual spreadsheets.
MR. POLAND: Okay.
MR. KEENAN: And if we could open up the one titled Composite Current Curve.

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MR. EARLE: Yes.
Q. (By Mr. Keenan) And I just want to go over this document and understand what's in it.
A. Yeah.
Q. First, are the numbers that are generated that are listed in this spreadsheet, are they generated from your regression model?
A. I believe they are.
Q. Okay.
A. Again, it's been awhile.
Q. Sure. Can you explain on all of these curve spreadsheets at what percentage vote share the colors codes changes?
A. Yes. Again, the blues are Democratic majority constituencies. The reds are Republican majority. The breakpoint between the dark blue and the light blue is at 45%. The break between the light blue and the orange is at 50. The breakpoint between the orange and the red is at 55.
Q. Okay. And I believe you testified previously that anything above 55 is considered a safe seat for that party?
A. Yes.
Q. And I guess on this -- on these

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spreadsheets it's expressed in terms of Republican two-party vote share?
A. Yes, that's correct.
Q. So a number of 45% is actually a 55% Democratic seat?
A. Yes.
Q. And so that would be a safe Democratic seat?
A. Right.
Q. There's some numbers across the top. I guess we'll be able to start on Column A and just could you -- what is the title in Column A supposed to represent?
A. If I could make a suggestion that will expedite this.
Q. Sure.
A. If we start at Column M --
Q. Okay. We can do that.
A. -- that says index_50.
Q. Sure.
A. This is assuming that the estimated value of partisanship is set with a statewide vote between the Republicans and Democrats at 50%, a 50/50 split. Okay? What is the performance of each district assuming a 50/50

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split statewide of the ballot. Okay? And so how would each district perform accordingly.
If we go over to index_40, we're assuming a 40% Republican and 60% Democratic split. And we increase at one percentage points gradients of Republican performance from column to column. So what we're seeing is how does the Republican strength shift in these districts as we move further to the right.
Q. As we move each column, would that be referred to as a 1% uniform swing?
A. A one point swing, yes.
Q. This is titled Composite Current Curve.
A. Uh-huh.
Q. Do you know what that refers to?
A. This Composite Current Curve, given that it's titled composite, this could be referring to a vote index composite rather than a regression analysis.
Q. Do you know what "current" refers to?
A. Current I would assume applies to the existing map, the maps as constituted in the State of Wisconsin before the '12 re-map.
Q. So that would have been the map that

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was in place from 2002 to 2010?
A. The one crafted by the federal court, yes, correct.
Q. So in order to read this map, if we just count the number of seats that are in the dark blue color, that would tell us how many safe Democrat seats there are under Column M, for example, in a 50/50 election?
A. You're correct.
Q. And if we move over one to the right, that would be a 51% Democratic election, 49% Republican election?
A. Yes.
Q. What's the column labeled B Actual? Do you know what that stands for?
A. Let me see. Okay. B Actual is most likely based upon the actual average from the composite, which, as I recall, was 49.1% Republican, but I'm not certain of that.
Q. And what's your understanding of what the composite was?
A. Again, it's -- as I said, it's been awhile. Given that we're using composite, this could be a composite of the statewide elections that Mr. Handrick and the team had estimated.

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And again, part of the correspondence and his previous testimony, there was an exceedingly strong relationship between the composite and the point estimates for open seat competition in the districts.
Q. The one generated by your regression model?
A. Yeah. Yeah.
Q. And then, as I take it, the Column A has numbers in it that refers to a particular assembly district?
A. Yes.
Q. Okay.
A. Yeah, those are the assembly district numbers, and they've been ranked from least to most Republican, from top to bottom.
Q. And we went over these headings in this particular document, but when we looked at some of these others, would the same reasoning apply to the headings and the numbers that are in those other curve spreadsheets?
A. Yeah, there was a root curve spreadsheet that was created in the other. And the subsequent simply descend from it, yes.
Q. If you could open up in that same

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folder the Team Map Curve.
A. Team Map Curve xlsx?
Q. Yes.
A. Yes.
Q. Okay. And I guess I just want to -- maybe we can just confirm that, do you know -- it refers to the Team Map. Do you know if that's the final map that was enacted?
A. I don't know.
Q. And then the testimony we just gave with respect to the column headings --
A. Uh-huh.
Q. -- that same testimony that we just heard with respect to the Current Map Curve, would that -- those same answers would apply to this Team Map Curve?
A. Yes, the same reasoning and the same coding is used, yes.
Q. So if someone wanted to use one of these spreadsheets to determine what the expected non-incumbent seat share would be for an election with a 51% Democratic vote share, they should look at a column that's labeled Index 49?
A. Yes.

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Q. Okay. And then if there was an expected -- determinant expected seat share from an election with a 52% Republican vote share, you should look at a column for Index 52, is that correct?
A. Yes.
Q. Can you go to the -- we can close out those spreadsheets there. If you have the one that's your -- the copy of the production you made in the Baldus case. That was Exhibit 57 in that case and I think 34 --
MR. POLAND: 34 here.
Q. (By Mr. Keenan) -- in this case.
A. Yes.
Q. Okay. And if you go into the Wisconsin 2010 folder.
A. Give me a moment. Yes.
Q. In that folder do you see a spreadsheet entitled Wisconsin_election_data?
A. Yes.
Q. Okay. Do you also see a spreadsheet entitled Wisconsin_election_data_rev1?
A. Yes.
Q. And I may be mistaken, but I believe Mr. Poland said that there wasn't such a file

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named Wisconsin_election_data on Exhibit 34. Does this -- looking at Exhibit 34 here, do you see such a file?
A. Yes.
Q. And if you go back to the main Wisconsin -- Wisc file.
A. Yes.
Q. Do you see a file that's labeled Wisconsin_1?
A. Yes.
Q. Okay. I believe Mr. Poland also said that he didn't believe there was a file named Wisconsin_1 on Exhibit 34. Do you see such a file on that exhibit?
A. Yes.
MR. KEENAN: Those are the two that I thought actually were in there.
MR. EARLE: We don't dispute that.
MR. KEENAN: I just wanted to get that.
MR. POLAND: That's fair. No. Thanks for making the record.
Q. (By Mr. Keenan) As part of your -- we can stay on that Exhibit 34. As part of your work as an expert witness in the Baldus case,

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did you do some work in terms of analyzing the compactness of the districts that were enacted under Act 43?
A. Compactness data were generated from the maps in preparation for trial, yes.
Q. And if you open up -- there's a file that's pretty close to that Wisconsin 1. It's called --
A. Wisc Compact?
Q. Wisc Compact. If you could open that up, please. And my question is going to be, can you tell me what this document represents?
A. Okay. This document represents a collection of different compactness measures that are generated by most redistricting software. They represent different types of compactness measures, whether they have to do with measures of circlitude (phonetic spelling) or filitude (phonetic spelling) or compactness and population placement.
There are seven or eight standard measures that exist. The most common that are used are what's called the Reock and the Polsby-Popper, which are basically a small circumscribing circle and then a perimetered

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area measure.
Q. And is it Reock? How do you pronounce R-e-o-c-k?
A. Reock.
Q. And what is the Reock method?
A. It's the Brett Farve of methods in terms of its spelling. Sorry.
As I recall, the Reock measure -- and again, it's been awhile since I've messed with these. The Reock measure is a small circumscribing circle measure which basically argues what is the smallest circle that can inscribe a district by design. So if you have a district shaped like your hand, you can draw a nice tight circle around it and it's a fairly compact district.
The perimeter to area measures, the Polsby-Popper measure, examines -- takes the perimeter of a district, makes a circle out of it and it covers a little area. That larger circle is filled in by the area of the district that provided the perimeter.
Taken together, these two measures help you ascribe general compactness.
Q. And if we look at the Reock method, I

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see that there's three different columns there. Do you know why there's three different calculations?
A. You've got the Reock, the Schwartzberg, the perimeter of the population, circle of the population, polygon, Polsby-Popper and the length/width measure, as well as the Arenburg. So which one do you want to have me look at?
Q. The Reock. And it looks like there's C Reock, A Reock and D Reock. There's three different ones.
A. Not on the sheet I'm looking at.
Q. Oh. Mine says Compactness Comparison. It's the left most --
MR. EARLE: Down here.
A. Oh, oh, oh.
Q. (By Mr. Keenan) Sorry.
MR. EARLE: We were on the wrong sheet. Now we're on the right sheet.
Q. (By Mr. Keenan) I think some of the data is the same between the sheets. And if you see the Reock it mentions -- there's like three different columns.
A. Yeah.

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Q. Do you know why there's three different columns?
A. I'm not sure why. Well, the third column is the difference between the first and the second.
Q. Oh.
A. I don't recall why there are two measures here. But if you look, there's a high degree of similitude between most of them.
Q. Okay. What did you determine was the mean Reock score for the assembly districts?
A. I don't recall.
Q. Does the spreadsheet reflect that?
A. Well, the mean A Reock is a .41. The mean B Reock is a .39. Yeah.
MR. KEENAN: Okay. Would you mark this as the next exhibit? Which one is that going to be?
THE REPORTER: 44.
(Exhibit No. 44 marked.)
MR. KEENAN: And we'll mark this one as 45.
(Exhibit No. 45 marked.)
Q. (By Mr. Keenan) So the first one is 44?

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A. Yes.
Q. So 44 is a copy of the Joint Pretrial Report in the Baldus case, although you could note I took some pages out because it was 145 pages.
MR. POLAND: I was going to say, it should be longer than this.
Q. (By Mr. Keenan) So it includes the table of contents and then it has some relevant paragraph numbers that will tell you about some of them. And then also 45 then is the tables that are exhibits to the pretrial report.
MR. EARLE: Do you see what we have to look forward to?
Q. (By Mr. Keenan) And so I think it will be easiest to --
THE WITNESS: I'm not coming out of retirement. Sorry.
Q. (By Mr. Keenan) -- easiest to look at Exhibit 45 first.
A. Yes.
Q. And look at Table 21, which is Page 30 on the bottom.
A. Yes.
Q. And then also we should open up Number

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44 to paragraph -- it looks like 182.
A. Yes.
Q. And 183. But you can see Paragraph 183 references Table 21.
A. Yes.
Q. Okay. And can you tell me what -- in Table 1 it says Source Gaddie. Do you see that?
A. Yes.
Q. Okay. So what does Table 21 show for the -- okay. First I should say on Table 21 it says smallest circle as one of the measures of compactness.
A. Yes.
Q. Is it your understanding that that would be a reference to the Reock test?
A. That's the Reock test. Small circumscribing circle, yes.
Q. And then the perimeter to area category would reference the Polsby-Popper?
A. I believe so, yes.
Q. Okay. And so what did you calculate the Reock test for the 2011 map to be the average?
A. For the 2011 map it's computed here as

being .39.
Q. Okay.
A. Which is the more sensitive of the two Reock measures that were reported.
Q. And then if we go to the pretrial report.
A. Uh-huh.
Q. In Paragraph 184.
A. Yes.
Q. It says, "The average smallest circle score for the entire assembly map is .28."
A. Yes.
Q. Range from .06 to .63. Is that correct?
A. No. That means that there's an error in the pretrial report because it should say the average perimeter to area score. Because if you look at those numbers, the numbers indicated in Paragraph 184 conform to the numbers exhibited in the bottom half of the 2011 assembly map column, which were perimeter errors. So there's actually an error in the pretrial report.
Q. If you were to correct the error for the average smallest circle score for the

entire assembly map, how would you have it read?
A. It would read .39.
Q. Okay. And what would the range be?
A. The range would be from .20 to .61.
Q. Thanks. That's all we needed.
MR. KEENAN: Do you mind if I just take a break?
MR. POLAND: No. Go right ahead.
MR. KEENAN: I may have a couple of more questions for him.
THE VIDEOGRAPHER: Going off the record. The time is 3:21 p.m.
(Recess.)
THE VIDEOGRAPHER: We are back on the record. The time is 3:24.
MR. KEENAN: We're back on the record and I want to say that I have no further questions and thank you for your time today.
MR. POLAND: I don't think we have anything further either.
THE WITNESS: Jason, do we have anything?
MR. GLIDEWELL: No, sir.
THE WITNESS: Gentlemen, thank you

very much. I appreciate you coming down.
THE VIDEOGRAPHER: Going off the record. The time is 3:25 p.m. End of Disc 4 and end of deposition.
(Discussion off the record.)
MR. POLAND: Do you want to waive signature or do you want to read it before -- read and sign?
THE WITNESS: Yeah, I'm comfortable with everything I've said. I can waive signature.
(Deposition concluded.)

C E R T I F I C A T E

STATE OF OKLAHOMA)
) SS:
COUNTY OF OKLAHOMA)

I, Susan Narvaez, a certified shorthand reporter within and for the State of Oklahoma, certify that RONALD KEITH GADDIE, Ph.D., was sworn to testify the truth; that the deposition was taken by me in stenotype and thereafter transcribed by computer and is a true and correct transcript of the testimony of the witness; that the deposition was taken on March 9, 2016 at 425 NW 7th Street, Oklahoma City, Oklahoma; that I am not an attorney for nor relative of either party, or otherwise interested in this action.

Witness my hand and seal of office on the 17th day of March 2016.

SUSAN NARVAEZ, CSR
for the State of Oklahoma
CSR #00404

–

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IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF WISCONSIN

WILLIAM WHITFORD, ET AL.,
Plaintiffs,

Case No. 15-CV-421-bbc

v.

GERALD NICHOL, et al.,
Defendants.

NOTICE OF VIDEOTAPED DEPOSITION OF RONALD KEITH GADDIE

TO: Brian P. Keenan
Assistant Attorney General
Wisconsin Department of Justice
P.O. Box 7857
Madison, WI 53707-7857

Jason Glidewell
Attorney at Law
516 East Central
Anadarko, OK 73005

PLEASE TAKE NOTICE that, pursuant to Rule 45 of the Federal Rules of Civil Procedure, the plaintiffs named in the Western District of Wisconsin Case No. 15-cv-421, by their counsel, Law Office of Peter G. Earle and Rathje & Woodward, LLC, will take the deposition of Ronald Keith Gaddie on March 9, 2016, beginning at 9:00 AM.

The deposition will be conducted at Dodson Court Reporting, 425 NW 7th St, Oklahoma City, OK 73102, and will be recorded stenographically by a person authorized by law to administer oaths. The deposition will also be videotaped. The deposition will continue from day to day until completed. A copy of the subpoena commanding the witness's appearance and the production of documents, electronically stored information, and tangible things is attached.

Dated this 17th day of February, 2016

CHICAGO LAWYERS' COMMITTEE
FOR CIVIL RIGHTS UNDER LAW, INC.

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Attorneys for Plaintiffs

CERTIFICATE OF SERVICE

I hereby certify that I caused a true and correct copy of the attached NOTICE OF VIDEOTAPED DEPOSITION OF RONALD KEITH GADDIE to be served this 17th day of February, 2016, on the following parties, by first-class U.S. Mail, postage prepaid, and by email:

Brian P. Keenan
Assistant Attorney General
Wisconsin Department of Justice
P.O. Box 7857
Madison, WI 53707-7857

Jason Glidewell
Attorney at Law
516 East Central
Anadarko, OK 73005

Ruth Greenwood

AO 88A (Rev. 02/14) Subpoena to Testify at a Deposition in a Civil Action

UNITED STATES DISTRICT COURT

for the

Western District of Wisconsin

WILLIAM WHITFORD, et al.

Plaintiff

GERALD NICHOL, et al

Defendant

Civil Action No. 15-CV-421-bbc

SUBPOENA TO TESTIFY AT A DEPOSITION IN A CIVIL ACTION

To: RONALD KEITH GADDIE
PROFESSOR OF POLITICAL SCIENCE, UNIVERSITY OF OKLAHOMA
222 DALE HALL TOWER, 455 W. LINDSEY, NORMAN, OK 73019

(Name of person to whom this subpoena is directed)

☑ *Testimony:* **YOU ARE COMMANDED** to appear at the time, date, and place set forth below to testify at a deposition to be taken in this civil action. If you are an organization, you must designate one or more officers, directors, or managing agents, or designate other persons who consent to testify on your behalf about the following matters, or those set forth in an attachment:

Place:	Date and Time:
Dodson Court Reporting 425 NW 7th St Oklahoma City, OK 73102	Wednesday March 9, 2016 at 9:00 AM.

The deposition will be recorded by this method: stenographic and audiovisual means

☑ *Production:* You, or your representatives, must also bring with you to the deposition the following documents, electronically stored information, or objects, and must permit inspection, copying, testing, or sampling of the material:

Please produce all materials identified in Exhibit A no later than Wednesday March 2, 2016, by delivering them to 425 NW 7th St, Oklahoma City, OK 73102

The following provisions of Fed. R. Civ. P. 45 are attached – Rule 45(c), relating to the place of compliance; Rule 45(d), relating to your protection as a person subject to a subpoena; and Rule 45(e) and (g), relating to your duty to respond to this subpoena and the potential consequences of not doing so.

Date: 02/17/2016

CLERK OF COURT

OR

Signature of Clerk or Deputy Clerk

Attorney's signature

The name, address, e-mail address, and telephone number of the attorney representing *(name of party)* Plaintiffs William Whitford, et al., who issues or requests this subpoena, are:

Ruth Greenwood, Chicago Lawyers' Committee for Civil Rights Under Law, 100 N LaSalle St, Suite 600 Chicago IL 60602, 312-888-4194

Notice to the person who issues or requests this subpoena

If this subpoena commands the production of documents, electronically stored information, or tangible things before trial, a notice and a copy of the subpoena must be served on each party in this case before it is served on the person to whom it is directed. Fed. R. Civ. P. 45(a)(4).

Civil Action No. 15-CV-421-bbc

PROOF OF SERVICE

(This section should not be filed with the court unless required by Fed. R. Civ. P. 45.)

I received this subpoena for *(name of individual and title, if any)* _____

on *(date)* _____ .

❒ I served the subpoena by delivering a copy to the named individual as follows: _____

_____

_____ on *(date)* _____ ; or

❒ I returned the subpoena unexecuted because: _____

_____ .

Unless the subpoena was issued on behalf of the United States, or one of its officers or agents, I have also tendered to the witness the fees for one day's attendance, and the mileage allowed by law, in the amount of $ _____ .

My fees are $ _____ for travel and $ _____ for services, for a total of $ 0 .

I declare under penalty of perjury that this information is true.

Date: _____

_____
Server's signature

_____
Printed name and title

_____
Server's address

Additional information regarding attempted service, etc.:

Federal Rule of Civil Procedure 45 (c), (d), (e), and (g) (Effective 12/1/13)

(c) Place of Compliance.

(1) ***For a Trial, Hearing, or Deposition.*** A subpoena may command a person to attend a trial, hearing, or deposition only as follows:

(A) within 100 miles of where the person resides, is employed, or regularly transacts business in person; or

(B) within the state where the person resides, is employed, or regularly transacts business in person, if the person

(i) is a party or a party's officer; or

(ii) is commanded to attend a trial and would not incur substantial expense.

(2) ***For Other Discovery.*** A subpoena may command:

(A) production of documents, electronically stored information, or tangible things at a place within 100 miles of where the person resides, is employed, or regularly transacts business in person; and

(B) inspection of premises at the premises to be inspected.

(d) Protecting a Person Subject to a Subpoena; Enforcement.

(1) ***Avoiding Undue Burden or Expense; Sanctions.*** A party or attorney responsible for issuing and serving a subpoena must take reasonable steps to avoid imposing undue burden or expense on a person subject to the subpoena. The court for the district where compliance is required must enforce this duty and impose an appropriate sanction—which may include lost earnings and reasonable attorney's fees—on a party or attorney who fails to comply.

(2) ***Command to Produce Materials or Permit Inspection.***

(A) *Appearance Not Required.* A person commanded to produce documents, electronically stored information, or tangible things, or to permit the inspection of premises, need not appear in person at the place of production or inspection unless also commanded to appear for a deposition, hearing, or trial.

(B) *Objections.* A person commanded to produce documents or tangible things or to permit inspection may serve on the party or attorney designated in the subpoena a written objection to inspecting, copying, testing, or sampling any or all of the materials or to inspecting the premises—or to producing electronically stored information in the form or forms requested. The objection must be served before the earlier of the time specified for compliance or 14 days after the subpoena is served. If an objection is made, the following rules apply:

(i) At any time, on notice to the commanded person, the serving party may move the court for the district where compliance is required for an order compelling production or inspection.

(ii) These acts may be required only as directed in the order, and the order must protect a person who is neither a party nor a party's officer from significant expense resulting from compliance.

(3) ***Quashing or Modifying a Subpoena.***

(A) *When Required.* On timely motion, the court for the district where compliance is required must quash or modify a subpoena that:

(i) fails to allow a reasonable time to comply;

(ii) requires a person to comply beyond the geographical limits specified in Rule 45(c);

(iii) requires disclosure of privileged or other protected matter, if no exception or waiver applies; or

(iv) subjects a person to undue burden.

(B) *When Permitted.* To protect a person subject to or affected by a subpoena, the court for the district where compliance is required may, on motion, quash or modify the subpoena if it requires:

(i) disclosing a trade secret or other confidential research, development, or commercial information; or

(ii) disclosing an unretained expert's opinion or information that does not describe specific occurrences in dispute and results from the expert's study that was not requested by a party.

(C) *Specifying Conditions as an Alternative.* In the circumstances described in Rule 45(d)(3)(B), the court may, instead of quashing or modifying a subpoena, order appearance or production under specified conditions if the serving party:

(i) shows a substantial need for the testimony or material that cannot be otherwise met without undue hardship; and

(ii) ensures that the subpoenaed person will be reasonably compensated.

(e) Duties in Responding to a Subpoena.

(1) ***Producing Documents or Electronically Stored Information.*** These procedures apply to producing documents or electronically stored information:

(A) *Documents.* A person responding to a subpoena to produce documents must produce them as they are kept in the ordinary course of business or must organize and label them to correspond to the categories in the demand.

(B) *Form for Producing Electronically Stored Information Not Specified.* If a subpoena does not specify a form for producing electronically stored information, the person responding must produce it in a form or forms in which it is ordinarily maintained or in a reasonably usable form or forms.

(C) *Electronically Stored Information Produced in Only One Form.* The person responding need not produce the same electronically stored information in more than one form.

(D) *Inaccessible Electronically Stored Information.* The person responding need not provide discovery of electronically stored information from sources that the person identifies as not reasonably accessible because of undue burden or cost. On motion to compel discovery or for a protective order, the person responding must show that the information is not reasonably accessible because of undue burden or cost. If that showing is made, the court may nonetheless order discovery from such sources if the requesting party shows good cause, considering the limitations of Rule 26(b)(2)(C). The court may specify conditions for the discovery.

(2) ***Claiming Privilege or Protection.***

(A) *Information Withheld.* A person withholding subpoenaed information under a claim that it is privileged or subject to protection as trial-preparation material must:

(i) expressly make the claim; and

(ii) describe the nature of the withheld documents, communications, or tangible things in a manner that, without revealing information itself privileged or protected, will enable the parties to assess the claim.

(B) *Information Produced.* If information produced in response to a subpoena is subject to a claim of privilege or of protection as trial-preparation material, the person making the claim may notify any party that received the information of the claim and the basis for it. After being notified, a party must promptly return, sequester, or destroy the specified information and any copies it has; must not use or disclose the information until the claim is resolved; must take reasonable steps to retrieve the information if the party disclosed it before being notified; and may promptly present the information under seal to the court for the district where compliance is required for a determination of the claim. The person who produced the information must preserve the information until the claim is resolved.

(g) Contempt.

The court for the district where compliance is required—and also, after a motion is transferred, the issuing court—may hold in contempt a person who, having been served, fails without adequate excuse to obey the subpoena or an order related to it.

For access to subpoena materials, see Fed. R. Civ. P. 45(a) Committee Note (2013).

Exhibit A

You, or your representatives, must produce to the Plaintiffs, by March 2, 2016 the following documents, communications, electronically stored information, or objects, whether sent or received (collectively "materials"), that are in your actual or constructive possession, custody or control, and permit the inspection, copying, testing, or sampling of the materials:

1. All materials reviewed, relied upon, considered, and/or prepared by or available to you pertaining to the redistricting process in Wisconsin after the 2010 census, and/or the planning, development, negotiation, drawing, revision, redrawing, or discussion of the districts and maps codified in Wisconsin Act 43, or any draft, potential, or proposed redistricting plan. This includes but is not limited to:
    a. All material you received and/or created in your work for the Wisconsin House and Senate Leadership from April 1, 2011 to June 30, 2011, including but not limited to correspondence, emails, plans, deposition transcripts, and/or summaries thereof.
    b. All documents you consulted, reviewed, or relied upon in the course of your work for the Wisconsin House and Senate Leadership from April 1, 2011 to June 30, 2011.
    c. Reports or other written materials prepared by you.
    d. A copy of your most current curriculum vitae.
2. All materials, including but not limited to e-mail, concerning any analyses, data, plans, procedures, and/or reports reviewed, relied upon, considered, or prepared by – or available to – any persons involved in the planning development, negotiation, drawing, revision, redrawing, or discussion of the districts and maps codified in Wisconsin Act 43 or any other draft, potential, or proposed redistricting plan.
3. All materials, including but not limited to e-mail, concerning the identities of persons who participated in the planning, development, negotiation, drawing, revision, redrawing, or discussion of the districts and maps codified in Wisconsin Act 43 or any other draft, potential, or proposed redistricting plan.
4. All materials, including but not limited to e-mail, concerning the objective facts referenced, used, or relied upon by – or available to – any persons involved in the planning, development, negotiation, drawing, revision, redrawing, or discussion of the districts and maps codified in Wisconsin Act 43 or any other draft, potential, or proposed redistricting plan.
5. All communications, including but not limited to e-mail, with any persons or entities concerning the redistricting process or the planning, development, negotiation, drawing, revision, redrawing, or discussion of the districts and maps codified in Wisconsin Act 43 or any other draft, potential, or proposed redistricting plan.

6. The specific electoral data you reviewed prior to April 17, 2011, in the course of building a partisan score for the Wisconsin assembly districts which you referenced in the second paragraph of your memo dated April 17, 2011, which was marked as Exhibit 57 to your deposition dated January 20, 2012, a copy of which is attached hereto and incorporated herein by reference, in which you wrote:

> "The measure of partisanship should exist to establish the change in the partisan balance of the district. We are not in court this time; we do not need to show that we have created a fair, balanced, or even a reactive map. But, we do need to show to lawmakers the political potential of the district.
>
> I have gone through the electoral data for state office and built a partisan score for the assembly districts. It is based on a regression analysis of the Assembly vote from 2006, 2008, and 2010, and it is based on prior election indicators of future election performance.
>
> I am also building a series of visual aides to demonstrate the partisan structure of Wisconsin politics. The graphs will communicate the top-to-bottom party basis of the state politics. It is evident, from the recent Supreme Court race and also the Milwaukee County executive contest, that the partisanship of Wisconsin is invading the ostensibly non-partisan races on the ballot this year."

7. The specific partisan scores assigned to the assembly districts by you which you referenced in the second paragraph of your memo dated April 17, 2011, which was marked as Exhibit 57 to your deposition dated January 20, 2012, in which you wrote:

> "The measure of partisanship should exist to establish the change in the partisan balance of the district. We are not in court this time; we do not need to show that we have created a fair, balanced, or even a reactive map. But, we do need to show to lawmakers the political potential of the district.
>
> I have gone through the electoral data for state office and built a partisan score for the assembly districts. It is based on a regression analysis of the Assembly vote from 2006, 2008, and 2010, and it is based on prior election indicators of future election performance.
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> I am also building a series of visual aides to demonstrate the partisan structure of Wisconsin politics. The graphs will communicate the top-to-bottom party basis of the state politics. It is evident, from the recent Supreme Court race and also the Milwaukee County executive contest, that the partisanship of Wisconsin is invading the ostensibly non-partisan races on the ballot this year."

8. The specific regression analysis referenced by you in the second paragraph of your memo dated April 17, 2011, which was marked as Exhibit 57 to your deposition dated January 20, 2012, in which you wrote:

> "The measure of partisanship should exist to establish the change in the partisan balance of the district. We are not in court this time; we do not need to show that we have created a fair, balanced, or even a reactive map. But, we do need to show to lawmakers the political potential of the district.
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> I have gone through the electoral data for state office and built a partisan score for the assembly districts. It is based on a regression analysis of the Assembly vote from 2006, 2008, and 2010, and it is based on prior election indicators of future election performance.
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> I am also building a series of visual aides to demonstrate the partisan structure of Wisconsin politics. The graphs will communicate the top-to-bottom party basis of the state politics. It is evident, from the recent Supreme Court race and also the Milwaukee County executive contest, that the partisanship of Wisconsin is invading the ostensibly non-partisan races on the ballot this year."

9. The identity and location of all documents generated in the course of conducting the regression analysis referenced by you in the second paragraph of your memo dated April 17, 2011, which was marked as Exhibit 57 to your deposition dated January 20, 2012, in which you wrote:

> "The measure of partisanship should exist to establish the change in the partisan balance of the district. We are not in court this time; we do not need to show that we have created a fair, balanced, or even a reactive map. But, we do need to show to lawmakers the political potential of the district.
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> I have gone through the electoral data for state office and built a partisan score for the assembly districts. It is based on a regression analysis of the Assembly vote from 2006, 2008, and 2010, and it is based on prior election indicators of future election performance.
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> I am also building a series of visual aides to demonstrate the partisan structure of Wisconsin politics. The graphs will communicate the top-to-bottom party basis of the state politics. It is evident, from the recent Supreme Court race and also the Milwaukee County executive contest, that the partisanship of Wisconsin is invading the ostensibly non-partisan races on the ballot this year."

10. The identity and location of all documents generated in the course of building the series of visual aides to demonstrate the partisan structure of Wisconsin politics referenced by you in the third paragraph of your memo dated April 17, 2011, which was marked as Exhibit 57 to your deposition dated January 20, 2012, in which you wrote:

> "The measure of partisanship should exist to establish the change in the partisan balance of the district. We are not in court this time; we do not need to show that we have created a fair, balanced, or even a reactive map. But, we do need to show to lawmakers the political potential of the district.
>
> I have gone through the electoral data for state office and built a partisan score for the assembly districts. It is based on a regression analysis of the Assembly vote from 2006, 2008, and 2010, and it is based on prior election indicators of future election performance.
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> I am also building a series of visual aides to demonstrate the partisan structure of Wisconsin politics. The graphs will communicate the top-to-bottom party basis of the state politics. It is evident, from the recent Supreme Court race and also the Milwaukee County executive contest, that the partisanship of Wisconsin is invading the ostensibly non-partisan races on the ballot this year."

11. All spreadsheets, in native format, in your possession containing data regarding partisan electoral performance of Wisconsin voters prepared during the months of April, May, and June of 2011.

CHICAGO LAWYERS' COMMITTEE
FOR CIVIL RIGHTS UNDER LAW, INC.
100 N. LA SALLE ST., SUITE 600
CHICAGO, ILLINOIS 60602-2403

URBAN PARTNERSHIP BANK
CHICAGO, IL 60649-2016
2-422/710

29181

029181

DATE 2/12/2016

CHECK AMOUNT $67.00

PAY Sixty-Seven exactly**********

TO THE ORDER OF: Ronald K. Gaddie
222 Dale Hall Tower
455 W Lindsey
Norman, OK 73019

TWO SIGNATURES REQUIRED OVER $2500.00

AUTHORIZED SIGNATURE

⑈029181⑈ ⑆071004226⑆ ⑈142 303 1⑈

EXHIBIT 31

Green Lexar flash drive produced by Professor Gaddie during his deposition

Deposition date: March 9, 2016

*A hard copy of the flash drive will be hand-delivered to the clerk.

MICHAEL BEST
& FRIEDRICH LLP

Michael Best & Friedrich LLP
Attorneys at Law
One South Pinckney Street
Suite 700
Madison, WI 53703
P.O. Box 1806
Madison, WI 53701-1806
Phone 608.257.3501
Fax 608.283.2275

Eric M. McLeod
Direct 608.283.2257
Email emmcleod@michaelbest.com

April 11, 2011

Professor Ronald Gaddie
University of Oklahoma
Department of Political Science
Norman, OK 73019

Re: Consulting Services Agreement

Dear Professor Gaddie:

Michael Best & Friedrich LLP ("MB&F") is currently engaged to represent the Wisconsin State Senate, by its Majority Leader Scott L. Fitzgerald ("Senate") and the Wisconsin State Assembly, by its Speaker Jeff Fitzgerald ("Assembly"), in connection with matters relating to the reapportionment of the Wisconsin Senate, Assembly and Congressional Districts arising out of the 2010 census (the "Representation"). We are pleased to confirm your retention to serve as a consultant to MB&F in connection with the Representation. This correspondence will serve as the agreement (the "Agreement") with you to provide the services described herein.

SCOPE OF ENGAGEMENT AND EXPECTATIONS

As a consultant to MB&F in connection with the Representation, we expect your duties to include service as an independent advisor on the appropriate racial and/or political make-up of legislative and congressional districts in Wisconsin. This will include, in part, providing advice based on certain statistical and demographic information and on election data or information. These consulting services may include, as well, testifying on the results of your work.

All work performed by you in connection with the Representation shall be for the sole purpose of assisting MB&F in rendering legal advice to the Senate and Assembly. Said work contemplates services of a character and quality that are adjunct to our services as lawyers and you shall perform said work at our direction. Accordingly, all communications between you and MB&F, as well as communications with the Senate and Assembly, and work performed by you in connection with the Representation, shall be confidential and made solely for the purpose of assisting counsel in rendering legal advice.

You will not discuss with or otherwise disclose to anyone, or with any entity, other than MB&F and the Senate or Assembly, without our written authorization, the nature or content of any oral or written communications or of any information or work performed related to the Representation. You will not disclose or permit inspection of any papers or documents related to the Representation without our written authorization in advance. All work papers, records or other documents or other things regardless of their nature and the source from which they emanate, which are related to the Representation, shall be held by you solely for our convenience and subject to our own qualified right to instruct you with respect to possession and control. Any work papers or materials prepared by you, or under your direction, belong to

MICHAEL BEST
& FRIEDRICH LLP

the Senate pursuant to the Representation, and every page must be sealed or otherwise stamped "Attorney/Client Work-Product Privilege Confidential."

TERM AND PAYMENT FOR SERVICES

The term of this engagement shall commence upon execution of this Agreement by you and MB&F (the "Parties") and will conclude upon written notice by either Party (the "Termination Date").

During the term of this Agreement, you will be compensated at a rate of $300 per hour.

In addition to compensation for work performed, you will also be reimbursed for your expenses in accordance with the Expense Reimbursement Policy of Michael Best.

While you will be a consultant for MB&F, the Senate and Assembly, for whom your services are being procured, are solely responsible for payment for your services pursuant to a retainer that has been established. In no event shall MB&F be responsible for payment for your services. In the event the retainer is exhausted, the remaining amount due shall be paid directly by the Senate and Assembly.

This Agreement does not establish an employer/employee relationship between you and MB&F, but rather you will be an independent contractor. As such, you will be responsible for securing insurance, retirement or other similar benefits and will not be covered by any insurance or other benefits MB&F may ordinarily extend to its employees.

AMENDMENT OF AGREEMENT

Amendments to this Agreement shall be in writing and executed by each of the Parties.

NOTICES

Any notice permitted or required under this Agreement shall be sent to the following addresses:

If to Prof. Gaddie:	Professor Ronald Gaddie University of Oklahoma Department of Political Science Norman, OK 73019
If to MB&F:	Michael Best & Friedrich LLP Attention: Eric M. McLeod One South Pinckney Street, Suite 700 Madison, WI 53703 Fax: 608-283-2275

MICHAEL BEST
& FRIEDRICH LLP

If you agree with the terms of this Agreement, please sign in the space provided below and return an executed copy to us. An additional copy has been provided for your records. We look forward to a mutually satisfying project.

Sincerely,

MICHAEL BEST & FRIEDRICH LLP

Eric M. McLeod

TERMS OF ENGAGEMENT ACKNOWLEDGED AND AGREED TO
this 11 day of April, 2011.

Prof. Ronald Gaddie

029472-0001\9087432.1

The measure of partisanship should exist to establish the change in the partisan balance of the district. We are not in court this time; we do not need to show that we have created a fair, balanced, or even a reactive map. But, we do need to show to lawmakers the political potential of the district.

I have gone through the electoral data for state office and built a partisan score for the assembly districts. It is based on a regression analysis of the Assembly vote from 2006, 2008, and 2010, and it is based on prior election indicators of future election performance.

I am also building a series of visual aides to demonstrate the partisan structure of Wisconsin politics. The graphs will communicate the top-to-bottom party basis of the state politics. It is evident, from the recent Supreme Court race and also the Milwaukee County executive contest, that the partisanship of Wisconsin is invading the ostensibly non-partisan races on the ballot this year.

EXHIBIT
38
Gaddie
PENGAD 800-631-6989
ASM Republican
Senate Republican
Sen. Republican

Milwaukee_Gaddie_4_16_11_V1_B

	Assembly				Senate		
DISTRICT	Current	New	Delta	DISTRICT	Current	New	Delta
1	51.15%	51.22%	0.07%	1	54.04%	53.48%	-0.56%
2	54.93%	53.82%	-1.11%				
3	56.10%	55.81%	-0.29%				
4	53.31%	53.76%	0.45%	2	55.44%	54.14%	-1.30%
5	53.74%	55.30%	1.56%				
6	59.77%	59.49%	-0.28%				
7	48.20%	44.42%	-3.78%	3	40.52%	37.54%	-2.98%
8	22.39%	21.22%	-1.17%				
9	36.73%	35.67%	-1.06%				
10	10.27%	16.52%	6.25%	4	17.58%	19.41%	1.83%
11	11.91%	17.63%	5.72%				
12	29.23%	24.92%	-4.31%				
13	43.67%	55.57%	11.90%	5	50.62%	54.90%	4.28%
14	59.06%	54.40%	-4.66%				
15	48.21%	54.61%	6.40%				
16	14.21%	13.02%	-1.19%	6	14.12%	17.86%	3.74%
17	13.21%	22.95%	9.74%				
18	15.28%	15.86%	0.58%				
19	29.15%	26.71%	-2.44%	7	41.13%	39.65%	-1.48%
20	43.71%	41.73%	-1.98%				
21	51.92%	52.85%	0.93%				
22	39.05%	56.14%	17.09%	8	52.82%	62.31%	9.49%
23	51.70%	61.82%	10.12%				
24	67.29%	55.27%	-12.02%				
25	52.79%	53.33%	0.54%	9	52.96%	57.67%	4.71%
26	45.42%	54.99%	9.57%				
27	59.20%	64.23%	5.03%				
28	54.85%	54.94%	0.09%	10	53.14%	53.30%	0.16%
29	51.32%	50.92%	-0.40%				
30	53.29%	53.81%	0.52%				
31	67.57%	59.08%	-8.49%	11	67.64%	58.42%	-9.22%
32	61.06%	62.14%	1.08%				
33	72.24%	72.63%	0.39%				
34	54.51%	53.00%	-1.51%	12	53.37%	53.91%	0.54%
35	52.30%	52.43%	0.13%				
36	53.06%	56.44%	3.38%				
37	51.33%	55.61%	4.28%	13	59.22%	59.19%	-0.03%
38	65.80%	59.84%	-5.96%				
39	60.35%	62.24%	1.89%				
40	58.50%	55.95%	-2.55%	14	55.86%	56.06%	0.20%
41	60.60%	56.99%	-3.61%				
42	48.54%	42.99%	-5.55%				
43	44.14%	44.59%	0.45%	15	41.20%	40.45%	-0.75%
44	36.74%	37.27%	0.53%				
45	42.39%	53.84%	11.45%				
46	42.07%	44.57%	2.50%	16	39.06%	36.54%	-2.52%
47	48.69%	39.36%	-9.33%				
48	28.03%	27.24%	-0.79%				
49	49.68%	49.93%	0.25%	17	48.46%	49.58%	1.12%
50	52.08%	51.77%	-0.31%				
51	44.01%	47.13%	3.12%				
52	57.39%	57.88%	0.49%	18	54.96%	55.18%	0.22%
53	62.74%	63.58%	0.84%				
54	45.08%	45.28%	0.20%				
55	49.34%	57.19%	7.85%	19	53.32%	52.56%	-0.76%
56	61.05%	54.12%	-6.93%				
57	47.26%	46.45%	-0.81%				
58	70.90%	70.79%	-0.11%	20	70.55%	68.06%	-2.49%
59	72.74%	61.52%	-11.22%				
60	68.12%	71.32%	3.20%				
61	35.98%	33.44%	-2.54%	21	49.86%	58.82%	8.96%
62	44.35%	62.45%	18.10%				
63	63.09%	56.78%	-6.31%				
64	35.66%	42.16%	6.50%	22	47.56%	37.34%	-10.22%
65	45.44%	36.00%	-9.44%				
66	59.12%	57.24%	-1.88%				
67	51.72%	51.63%	-0.09%	23	49.98%	51.78%	1.80%
68	45.01%	51.15%	6.14%				
69	54.06%	53.57%	-0.49%				
70	49.74%	50.00%	0.26%	24	46.72%	46.21%	-0.51%
71	41.68%	40.95%	-0.73%				
72	49.03%	50.38%	1.35%				
73	39.55%	40.05%	0.50%	25	44.88%	45.67%	0.79%
74	43.78%	45.03%	1.25%				
75	51.71%	52.31%	0.60%				
76	24.29%	20.80%	-3.49%	26	20.85%	20.85%	0.00%
77	23.88%	24.52%	0.64%				
78	14.09%	17.18%	3.09%				
79	37.49%	36.70%	-0.79%	27	38.38%	39.67%	1.29%
80	42.15%	39.44%	-2.71%				
81	36.16%	39.11%	2.95%				
82	58.59%	55.72%	-2.87%	28	64.48%	62.55%	-1.93%
83	69.70%	70.25%	0.55%				
84	64.99%	61.26%	-3.73%				
85	48.91%	47.54%	-1.37%	29	52.00%	54.17%	2.17%
86	54.56%	55.31%	0.75%				
87	52.16%	53.42%	1.26%				
88	44.85%	53.47%	8.62%	30	50.38%	52.62%	2.24%
89	55.76%	55.58%	-0.18%				
90	49.59%	40.13%	-9.46%				
91	45.87%	44.45%	-1.42%	31	46.89%	44.98%	-1.91%
92	50.79%	53.85%	3.06%				
93	44.73%	39.55%	-5.18%				
94	51.57%	51.93%	0.36%	32	44.43%	44.60%	0.17%
95	36.02%	36.26%	0.24%				
96	45.32%	46.24%	0.92%				
97	59.96%	62.39%	2.43%	33	68.84%	67.97%	-0.87%
98	70.96%	67.99%	-2.97%				
99	73.35%	69.84%	-3.51%				

Plan Comparison.xlsm
Created 5/9/11 5:39 pm
accessed 4/27/12 4:50 pm
modified 4/27/12 4:50 pm
file path: /Users/afoltz/Desktop/projects/Plan Comparison.xlsm

Current Map	Assembly	Senate
Safe GOP (55%+)	27	7
Lean GOP (52.1-54.9%):	13	8
Total GOP Seats (safe + lean):	40	15
Swing (48-52%):	19	5
Lean DEM (45.1-47.9%):	7	3
Safe DEM (-45%):	33	10
Total DEM Seats (safe + lean):	40	13

New Map	Assembly	Senate
Safe GOP (55%+)	34	10
New Lean GOP (52.1-54.9%):	18	8
Total GOP Seats (safe + lean):	52	18
New Swing (48-52%)	9	2
New Lean DEM (45.1-47.9%):	6	2
Safe DEM (-45%):	32	11
Total DEM Seats (safe + lean):	38	13

EXHIBIT 39 Gaddie
PENGAD 800-631-6989

Statewide2_Milwaukee_Gaddie_4_16_11_V1_B

Assembly				Senate			
DISTRICT	Current	New	Delta	DISTRICT	Current	New	Delta
1	51.15%	51.22%	0.07%	1	54.04%	53.48%	-0.56%
2	54.93%	53.82%	-1.11%				
3	56.10%	55.81%	-0.29%				
4	53.31%	53.76%	0.45%	2	55.44%	54.15%	-1.29%
5	53.74%	55.31%	1.57%				
6	59.77%	53.47%	-6.30%				
7	48.20%	44.42%	-3.78%	3	40.52%	37.54%	-2.98%
8	22.39%	21.22%	-1.17%				
9	36.73%	35.67%	-1.06%				
10	10.27%	16.52%	6.25%	4	17.58%	19.41%	1.83%
11	11.91%	17.63%	5.72%				
12	29.23%	24.92%	-4.31%				
13	43.67%	55.57%	11.90%	5	50.62%	54.90%	4.28%
14	59.06%	54.40%	-4.66%				
15	48.21%	54.61%	6.40%				
16	14.21%	13.02%	-1.19%	6	14.12%	17.86%	3.74%
17	13.21%	22.95%	9.74%				
18	15.28%	15.86%	0.58%				
19	29.15%	26.71%	-2.44%	7	41.13%	39.65%	-1.48%
20	43.71%	41.73%	-1.98%				
21	51.92%	52.85%	0.93%				
22	39.05%	56.14%	17.09%	8	52.82%	62.31%	9.49%
23	51.70%	61.82%	10.12%				
24	67.29%	69.84%	2.55%				
25	52.79%	53.33%	0.54%	9	52.96%	57.67%	4.71%
26	45.42%	54.99%	9.57%				
27	59.20%	64.23%	5.03%				
28	54.85%	54.94%	0.09%	10	53.14%	53.30%	0.16%
29	51.32%	50.92%	-0.40%				
30	53.29%	53.81%	0.52%				
31	67.57%	56.05%	-11.52%	11	67.64%	58.19%	-9.45%
32	61.06%	62.73%	1.67%				
33	72.24%	56.31%	-15.93%				
34	54.51%	53.44%	-1.07%	12	53.37%	53.89%	0.52%
35	52.30%	53.29%	0.99%				
36	53.06%	55.07%	2.01%				
37	51.33%	60.43%	9.10%	13	59.22%	61.69%	2.47%
38	65.80%	62.52%	-3.28%				
39	60.35%	62.04%	1.69%				
40	58.50%	55.67%	-2.83%	14	55.86%	55.64%	-0.22%
41	60.60%	55.29%	-5.31%				
42	48.54%	55.97%	7.43%				
43	44.14%	38.55%	-5.59%	15	41.20%	38.75%	-2.45%
44	36.74%	37.27%	0.53%				
45	42.39%	40.82%	-1.57%				
46	42.07%	44.57%	2.50%	16	39.06%	36.54%	-2.52%
47	48.69%	39.36%	-9.33%				
48	28.03%	27.24%	-0.79%				
49	49.68%	49.74%	0.06%	17	48.46%	49.23%	0.77%
50	52.08%	51.90%	-0.18%				
51	44.01%	46.20%	2.19%				
52	57.39%	57.88%	0.49%	18	54.96%	55.05%	0.09%
53	62.74%	62.78%	0.04%				
54	45.08%	45.19%	0.11%				
55	49.34%	57.94%	8.60%	19	53.32%	52.56%	-0.76%
56	61.05%	53.44%	-7.61%				
57	47.26%	46.45%	-0.81%				
58	70.90%	70.79%	-0.11%	20	70.55%	68.06%	-2.49%
59	72.74%	61.52%	-11.22%				
60	68.12%	71.32%	3.20%				
61	35.98%	57.24%	21.26%	21	49.86%	57.79%	7.93%
62	44.35%	59.48%	15.13%				
63	63.09%	56.78%	-6.31%				
64	35.66%	42.16%	6.50%	22	47.56%	37.34%	-10.22%
65	45.44%	36.00%	-9.44%				
66	59.12%	33.44%	-25.68%				
67	51.72%	51.63%	-0.09%	23	49.98%	51.75%	1.77%
68	45.01%	50.00%	4.99%				
69	54.06%	53.67%	-0.39%				
70	49.74%	47.54%	-2.20%	24	46.72%	46.64%	-0.08%
71	41.68%	41.01%	-0.67%				
72	49.03%	51.69%	2.66%				
73	39.55%	40.05%	0.50%	25	44.88%	45.67%	0.79%
74	43.78%	45.03%	1.25%				
75	51.71%	52.31%	0.60%				
76	24.29%	20.80%	-3.49%	26	20.85%	20.85%	0.00%
77	23.88%	24.52%	0.64%				
78	14.09%	17.18%	3.09%				
79	37.49%	36.70%	-0.79%	27	38.38%	40.45%	2.07%
80	42.15%	40.32%	-1.83%				
81	36.16%	44.54%	8.38%				
82	58.59%	55.72%	-2.87%	28	64.48%	62.49%	-1.99%
83	69.70%	70.15%	0.45%				
84	64.99%	61.26%	-3.73%				
85	48.91%	53.65%	4.74%	29	52.00%	54.23%	2.23%
86	54.56%	55.47%	0.91%				
87	52.16%	53.42%	1.26%				
88	44.85%	58.65%	13.80%	30	50.38%	52.29%	1.91%
89	55.76%	55.58%	-0.18%				
90	49.59%	40.13%	-9.46%				
91	45.87%	44.31%	-1.56%	31	46.89%	44.94%	-1.95%
92	50.79%	39.55%	-11.24%				
93	44.73%	51.15%	6.42%				
94	51.57%	51.93%	0.36%	32	44.43%	44.63%	0.20%
95	36.02%	36.26%	0.24%				
96	45.32%	46.40%	1.08%				
97	59.96%	62.39%	2.43%	33	68.84%	67.98%	-0.86%
98	70.96%	67.99%	-2.97%				
99	73.35%	72.66%	-0.69%				

Current Map		
	Assembly	Senate
Safe GOP (55%+)	27	7
Lean GOP (52.1-54.9%):	13	8
Total GOP Seats (safe + lean):	40	15
Swing (48-52%):	19	5
Lean DEM (45.1-47.9%):	7	3
Safe DEM (-45%):	33	10
Total DEM Seats (safe + lean):	40	13

New Map		
	Assembly	Senate
Safe GOP (55%+)	35	10
New Lean GOP (52.1-54.9%):	17	8
Total GOP Seats (safe + lean):	52	18
New Swing (48-52%)	9	2
New Lean DEM (45.1-47.9%):	6	2
Safe DEM (-45%):	32	11
Total DEM Seats (safe + lean):	38	13

Final Map

Assembly				Senate			
DISTRICT	Current	New	Delta	DISTRICT	Current	New	Delta
1	51.15%	51.22%	0.07%	1	54.04%	53.73%	-0.31%
2	54.93%	54.84%	-0.09%				
3	56.10%	55.58%	-0.52%				
4	53.31%	53.47%	0.16%	2	55.44%	55.23%	-0.21%
5	53.74%	54.28%	0.54%				
6	59.77%	58.33%	-1.44%				
7	48.20%	45.38%	-2.82%	3	40.52%	38.12%	-2.40%
8	22.39%	30.48%	8.09%				
9	36.73%	29.14%	-7.59%				
10	10.27%	12.59%	2.32%	4	17.58%	19.63%	2.05%
11	11.91%	19.58%	7.67%				
12	29.23%	27.51%	-1.72%				
13	43.67%	58.67%	15.00%	5	50.62%	57.72%	7.10%
14	59.06%	58.64%	-0.42%				
15	48.21%	55.48%	7.27%				
16	14.21%	10.54%	-3.67%	6	14.12%	15.55%	1.43%
17	13.21%	19.84%	6.63%				
18	15.28%	14.94%	-0.34%				
19	29.15%	28.03%	-1.12%	7	41.13%	40.53%	-0.60%
20	43.71%	43.12%	-0.59%				
21	51.92%	52.94%	1.02%				
22	39.05%	66.82%	27.77%	8	52.82%	60.88%	8.06%
23	51.70%	57.64%	5.94%				
24	67.29%	58.49%	-8.80%				
25	52.79%	53.26%	0.47%	9	52.96%	55.19%	2.23%
26	45.42%	55.97%	10.55%				
27	59.20%	56.19%	-3.01%				
28	54.85%	55.00%	0.15%	10	53.14%	53.32%	0.18%
29	51.32%	50.97%	-0.35%				
30	53.29%	53.78%	0.49%				
31	67.57%	56.33%	-11.24%	11	67.64%	60.13%	-7.51%
32	61.06%	62.27%	1.21%				
33	72.24%	61.81%	-10.43%				
34	54.51%	55.22%	0.71%	12	53.37%	54.39%	1.02%
35	52.30%	52.99%	0.69%				
36	53.06%	54.84%	1.78%				
37	51.33%	58.11%	6.78%	13	59.22%	60.17%	0.95%
38	65.80%	60.45%	-5.35%				
39	60.35%	62.00%	1.65%				
40	58.50%	58.07%	-0.43%	14	55.86%	56.02%	0.16%
41	60.60%	55.16%	-5.44%				
42	48.54%	54.94%	6.40%				
43	44.14%	43.06%	-1.08%	15	41.20%	40.17%	-1.03%
44	36.74%	37.22%	0.48%				
45	42.39%	40.08%	-2.31%				
46	42.07%	42.39%	0.32%	16	39.06%	34.13%	-4.93%
47	48.69%	33.35%	-15.34%				
48	28.03%	27.56%	-0.47%				
49	49.68%	49.59%	-0.09%	17	48.46%	49.23%	0.77%
50	52.08%	52.06%	-0.02%				
51	44.01%	46.23%	2.22%				
52	57.39%	59.06%	1.67%	18	54.96%	55.01%	0.05%
53	62.74%	61.85%	-0.89%				
54	45.08%	45.22%	0.14%				
55	49.34%	55.06%	5.72%	19	53.32%	53.02%	-0.30%
56	61.05%	58.86%	-2.19%				
57	47.26%	44.50%	-2.76%				
58	70.90%	70.54%	-0.36%	20	70.55%	69.46%	-1.09%
59	72.74%	68.31%	-4.43%				
60	68.12%	69.52%	1.40%				
61	35.98%	57.22%	21.24%	21	49.86%	57.77%	7.91%
62	44.35%	56.56%	12.21%				
63	63.09%	59.64%	-3.45%				
64	35.66%	42.72%	7.06%	22	47.56%	36.97%	-10.59%
65	45.44%	35.92%	-9.52%				
66	59.12%	31.71%	-27.41%				
67	51.72%	51.67%	-0.05%	23	49.98%	51.75%	1.77%
68	45.01%	49.38%	4.37%				
69	54.06%	54.16%	0.10%				
70	49.74%	50.73%	0.99%	24	46.72%	47.51%	0.79%
71	41.68%	40.72%	-0.96%				
72	49.03%	51.49%	2.46%				
73	39.55%	40.16%	0.61%	25	44.88%	44.88%	0.00%
74	43.78%	42.89%	-0.89%				
75	51.71%	52.18%	0.47%				
76	24.29%	14.49%	-9.80%	26	20.85%	20.98%	0.13%
77	23.88%	19.23%	-4.65%				
78	14.09%	30.84%	16.75%				
79	37.49%	41.80%	4.31%	27	38.38%	41.49%	3.11%
80	42.15%	38.55%	-3.60%				
81	36.16%	44.56%	8.40%				
82	58.59%	57.08%	-1.51%	28	64.48%	60.93%	-3.55%
83	69.70%	68.31%	-1.39%				
84	64.99%	57.10%	-7.89%				
85	48.91%	48.38%	-0.53%	29	52.00%	52.47%	0.47%
86	54.56%	55.08%	0.52%				
87	52.16%	53.74%	1.58%				
88	44.85%	53.19%	8.34%	30	50.38%	50.55%	0.17%
89	55.76%	55.73%	-0.03%				
90	49.59%	40.40%	-9.19%				
91	45.87%	39.57%	-6.30%	31	46.89%	44.94%	-1.95%
92	50.79%	44.30%	-6.49%				
93	44.73%	51.10%	6.37%				
94	51.57%	51.91%	0.34%	32	44.43%	44.63%	0.20%
95	36.02%	36.36%	0.34%				
96	45.32%	46.40%	1.08%				
97	59.96%	62.91%	2.95%	33	68.84%	68.60%	-0.24%
98	70.96%	67.02%	-3.94%				
99	73.35%	74.85%	1.50%				

Current Map		
	Assembly	Senate
Strong GOP (55%+)	27	7
Lean GOP (52.1-54.9%):	13	8
Total GOP Seats (strong + lean):	40	15
Swing (48-52%):	19	5
Lean DEM (45.1-47.9%):	7	3
Strong DEM (-45%):	33	10
Total DEM Seats (strong + lean):	40	13

New Map		
	Assembly	Senate
Strong GOP (55%+)	38	12
New Lean GOP (52.1-54.9%):	14	5
Total GOP Seats (strong + lean):	52	17
New Swing (48-52%)	10	3
New Lean DEM (45.1-47.9%):	4	1
Strong DEM (-45%):	33	12
Total DEM Seats (strong + lean):	37	13

Final Map

Assembly				Senate			
DISTRICT	Current	New	Delta	DISTRICT	Current	New	Delta
99	73.35%	74.85%	1.50%	1	54.04%	53.73%	-0.31%
58	70.90%	70.54%	-0.36%				
60	68.12%	69.52%	1.40%				
59	72.74%	68.31%	-4.43%	2	55.44%	55.23%	-0.21%
83	69.70%	68.31%	-1.39%				
98	70.96%	67.02%	-3.94%				
22	39.05%	66.82%	27.77%	3	40.52%	38.12%	-2.40%
97	59.96%	62.91%	2.95%				
32	61.06%	62.27%	1.21%				
39	60.35%	62.00%	1.65%	4	17.58%	19.63%	2.05%
53	62.74%	61.85%	-0.89%				
33	72.24%	61.81%	-10.43%				
38	65.80%	60.45%	-5.35%	5	50.62%	57.72%	7.10%
63	63.09%	59.64%	-3.45%				
52	57.39%	59.06%	1.67%				
56	61.05%	58.86%	-2.19%	6	14.12%	15.55%	1.43%
13	43.67%	58.67%	15.00%				
14	59.06%	58.64%	-0.42%				
24	67.29%	58.49%	-8.80%	7	41.13%	40.53%	-0.60%
6	59.77%	58.33%	-1.44%				
37	51.33%	58.11%	6.78%				
40	58.50%	58.07%	-0.43%	8	52.82%	60.88%	8.06%
23	51.70%	57.64%	5.94%				
61	35.98%	57.22%	21.24%				
84	64.99%	57.10%	-7.89%	9	52.96%	55.19%	2.23%
82	58.59%	57.08%	-1.51%				
62	44.35%	56.56%	12.21%				
31	67.57%	56.33%	-11.24%	10	53.14%	53.32%	0.18%
27	59.20%	56.19%	-3.01%				
26	45.42%	55.97%	10.55%				
89	55.76%	55.73%	-0.03%	11	67.64%	60.13%	-7.51%
3	56.10%	55.58%	-0.52%				
15	48.21%	55.48%	7.27%				
34	54.51%	55.22%	0.71%	12	53.37%	54.39%	1.02%
41	60.60%	55.16%	-5.44%				
86	54.56%	55.08%	0.52%				
55	49.34%	55.06%	5.72%	13	59.22%	60.17%	0.95%
28	54.85%	55.00%	0.15%				
42	48.54%	54.94%	6.40%				
2	54.93%	54.84%	-0.09%	14	55.86%	56.02%	0.16%
36	53.06%	54.84%	1.78%				
5	53.74%	54.28%	0.54%				
69	54.06%	54.16%	0.10%	15	41.20%	40.17%	-1.03%
30	53.29%	53.78%	0.49%				
87	52.16%	53.74%	1.58%				
4	53.31%	53.47%	0.16%	16	39.06%	34.13%	-4.93%
25	52.79%	53.26%	0.47%				
88	44.85%	53.19%	8.34%				
35	52.30%	52.99%	0.69%	17	48.46%	49.23%	0.77%
21	51.92%	52.94%	1.02%				
75	51.71%	52.18%	0.47%				
50	52.08%	52.06%	-0.02%	18	54.96%	55.01%	0.05%
94	51.57%	51.91%	0.34%				
67	51.72%	51.67%	-0.05%				
72	49.03%	51.49%	2.46%	19	53.32%	53.02%	-0.30%
1	51.15%	51.22%	0.07%				
93	44.73%	51.10%	6.37%				
29	51.32%	50.97%	-0.35%	20	70.55%	69.46%	-1.09%
70	49.74%	50.73%	0.99%				
49	49.68%	49.59%	-0.09%				
68	45.01%	49.38%	4.37%	21	49.86%	57.77%	7.91%
85	48.91%	48.38%	-0.53%				
96	45.32%	46.40%	1.08%				
51	44.01%	46.23%	2.22%	22	47.56%	36.97%	-10.59%
7	48.20%	45.38%	-2.82%				
54	45.08%	45.22%	0.14%				
81	36.16%	44.56%	8.40%	23	49.98%	51.75%	1.77%
57	47.26%	44.50%	-2.76%				
92	50.79%	44.30%	-6.49%				
20	43.71%	43.12%	-0.59%	24	46.72%	47.51%	0.79%
43	44.14%	43.06%	-1.08%				
74	43.78%	42.89%	-0.89%				
64	35.66%	42.72%	7.06%	25	44.88%	44.88%	0.00%
46	42.07%	42.39%	0.32%				
79	37.49%	41.80%	4.31%				
71	41.68%	40.72%	-0.96%	26	20.85%	20.98%	0.13%
90	49.59%	40.40%	-9.19%				
73	39.55%	40.16%	0.61%				
45	42.39%	40.08%	-2.31%	27	38.38%	41.49%	3.11%
91	45.87%	39.57%	-6.30%				
80	42.15%	38.55%	-3.60%				
44	36.74%	37.22%	0.48%	28	64.48%	60.93%	-3.55%
95	36.02%	36.36%	0.34%				
65	45.44%	35.92%	-9.52%				
47	48.69%	33.35%	-15.34%	29	52.00%	52.47%	0.47%
66	59.12%	31.71%	-27.41%				
78	14.09%	30.84%	16.75%				
8	22.39%	30.48%	8.09%	30	50.38%	50.55%	0.17%
9	36.73%	29.14%	-7.59%				
19	29.15%	28.03%	-1.12%				
48	28.03%	27.56%	-0.47%	31	46.89%	44.94%	-1.95%
12	29.23%	27.51%	-1.72%				
17	13.21%	19.84%	6.63%				
11	11.91%	19.58%	7.67%	32	44.43%	44.63%	0.20%
77	23.88%	19.23%	-4.65%				
18	15.28%	14.94%	-0.34%				
76	24.29%	14.49%	-9.80%	33	68.84%	68.60%	-0.24%
10	10.27%	12.59%	2.32%				
16	14.21%	10.54%	-3.67%				

Current Map		
	Assembly	Senate
Strong GOP (55%+)	27	7
Lean GOP (52.1-54.9%):	13	8
Total GOP Seats (strong + lean):	40	15
Swing (48-52%):	19	5
Lean DEM (45.1-47.9%):	7	3
Strong DEM (-45%):	33	10
Total DEM Seats (strong + lean):	40	13

New Map		
	Assembly	Senate
Strong GOP (55%+)	38	12
New Lean GOP (52.1-54.9%):	14	5
Total GOP Seats (strong + lean):	52	17
New Swing (48-52%)	10	3
New Lean DEM (45.1-47.9%):	4	1
Strong DEM (-45%):	33	12
Total DEM Seats (strong + lean):	37	13

Kessler Map

Assembly				Senate			
DISTRICT	Current	New	Delta	DISTRICT	Current	New	Delta
1	51.15%	58.28%	7.13%	1	54.04%	55.88%	1.84%
2	54.93%	48.90%	-6.03%				
3	56.10%	59.95%	3.85%				
4	53.31%	54.91%	1.60%	2	55.44%	57.84%	2.40%
5	53.74%	58.65%	4.91%				
6	59.77%	60.17%	0.40%				
7	48.20%	48.01%	-0.19%	3	40.52%	40.00%	-0.52%
8	22.39%	22.82%	0.43%				
9	36.73%	34.52%	-2.21%				
10	10.27%	33.07%	22.80%	4	17.58%	31.02%	13.44%
11	11.91%	30.48%	18.57%				
12	29.23%	29.01%	-0.22%				
13	43.67%	45.28%	1.61%	5	50.62%	49.98%	-0.64%
14	59.06%	57.34%	-1.72%				
15	48.21%	47.62%	-0.59%				
16	14.21%	14.26%	0.05%	6	14.12%	21.34%	7.22%
17	13.21%	24.94%	11.73%				
18	15.28%	23.19%	7.91%				
19	29.15%	31.45%	2.30%	7	41.13%	41.45%	0.32%
20	43.71%	45.14%	1.43%				
21	51.92%	49.51%	-2.41%				
22	39.05%	25.68%	-13.37%	8	52.82%	48.86%	-3.96%
23	51.70%	46.50%	-5.20%				
24	67.29%	71.71%	4.42%				
25	52.79%	49.48%	-3.31%	9	52.96%	49.17%	-3.79%
26	45.42%	46.38%	0.96%				
27	59.20%	51.22%	-7.98%				
28	54.85%	55.60%	0.75%	10	53.14%	53.19%	0.05%
29	51.32%	46.68%	-4.64%				
30	53.29%	57.21%	3.92%				
31	67.57%	69.18%	1.61%	11	67.64%	68.08%	0.44%
32	61.06%	61.62%	0.56%				
33	72.24%	71.77%	-0.47%				
34	54.51%	48.62%	-5.89%	12	53.37%	51.36%	-2.01%
35	52.30%	50.09%	-2.21%				
36	53.06%	54.77%	1.71%				
37	51.33%	49.82%	-1.51%	13	59.22%	60.12%	0.90%
38	65.80%	67.73%	1.93%				
39	60.35%	62.35%	2.00%				
40	58.50%	57.79%	-0.71%	14	55.86%	49.86%	-6.00%
41	60.60%	44.17%	-16.43%				
42	48.54%	48.23%	-0.31%				
43	44.14%	42.34%	-1.80%	15	41.20%	41.30%	0.10%
44	36.74%	38.88%	2.14%				
45	42.39%	43.02%	0.63%				
46	42.07%	42.59%	0.52%	16	39.06%	38.13%	-0.93%
47	48.69%	47.09%	-1.60%				
48	28.03%	27.47%	-0.56%				
49	49.68%	49.84%	0.16%	17	48.46%	48.46%	0.00%
50	52.08%	51.88%	-0.20%				
51	44.01%	44.09%	0.08%				
52	57.39%	57.29%	-0.10%	18	54.96%	54.84%	-0.12%
53	62.74%	62.70%	-0.04%				
54	45.08%	44.00%	-1.08%				
55	49.34%	49.95%	0.61%	19	53.32%	52.88%	-0.44%
56	61.05%	60.64%	-0.41%				
57	47.26%	48.31%	1.05%				
58	70.90%	70.35%	-0.55%	20	70.55%	69.15%	-1.40%
59	72.74%	69.94%	-2.80%				
60	68.12%	67.37%	-0.75%				
61	35.98%	42.56%	6.58%	21	49.86%	49.36%	-0.50%
62	44.35%	41.72%	-2.63%				
63	63.09%	61.66%	-1.43%				
64	35.66%	36.48%	0.82%	22	47.56%	46.30%	-1.26%
65	45.44%	44.02%	-1.42%				
66	59.12%	58.37%	-0.75%				
67	51.72%	51.10%	-0.62%	23	49.98%	49.21%	-0.77%
68	45.01%	44.54%	-0.47%				
69	54.06%	51.90%	-2.16%				
70	49.74%	49.42%	-0.32%	24	46.72%	46.56%	-0.16%
71	41.68%	41.48%	-0.20%				
72	49.03%	48.87%	-0.16%				
73	39.55%	40.78%	1.23%	25	44.88%	45.31%	0.43%
74	43.78%	44.86%	1.08%				
75	51.71%	50.50%	-1.21%				
76	24.29%	24.20%	-0.09%	26	20.85%	21.36%	0.51%
77	23.88%	26.21%	2.33%				
78	14.09%	13.34%	-0.75%				
79	37.49%	38.52%	1.03%	27	38.38%	38.25%	-0.13%
80	42.15%	41.95%	-0.20%				
81	36.16%	34.87%	-1.29%				
82	58.59%	59.64%	1.05%	28	64.48%	65.01%	0.53%
83	69.70%	67.79%	-1.91%				
84	64.99%	66.69%	1.70%				
85	48.91%	56.47%	7.56%	29	52.00%	56.13%	4.13%
86	54.56%	56.80%	2.24%				
87	52.16%	54.92%	2.76%				
88	44.85%	45.13%	0.28%	30	50.38%	49.62%	-0.76%
89	55.76%	55.33%	-0.43%				
90	49.59%	47.70%	-1.89%				
91	45.87%	45.82%	-0.05%	31	46.89%	46.82%	-0.07%
92	50.79%	49.85%	-0.94%				
93	44.73%	45.40%	0.67%				
94	51.57%	47.65%	-3.92%	32	44.43%	44.43%	0.00%
95	36.02%	40.44%	4.42%				
96	45.32%	45.76%	0.44%				
97	59.96%	69.88%	9.92%	33	68.84%	71.46%	2.62%
98	70.96%	72.93%	1.97%				
99	73.35%	71.84%	-1.51%				

Current Map		
	Assembly	Senate
Strong GOP (55%+)	27	7
Lean GOP (52.1-54.9%):	13	8
Total GOP Seats (strong + lean):	40	15
Swing (48-52%):	19	5
Lean DEM (45.1-47.9%):	7	3
Strong DEM (-45%):	33	10
Total DEM Seats (strong + lean):	40	13

New Map		
	Assembly	Senate
Strong GOP (55%+)	31	8
New Lean GOP (52.1-54.9%):	3	3
Total GOP Seats (strong + lean):	34	11
New Swing (48-52%)	19	9
New Lean DEM (45.1-47.9%):	13	4
Strong DEM (-45%):	33	9
Total DEM Seats (strong + lean):	46	13

Milwaukee_Gaddie_4_16_11_V1_B

DISTRICT				2002	2004	2006	2008	2010	Cycles GOP
1	51.15%	51.22%	0.07%	R	R	R	R	R	5
2	54.93%	53.82%	-1.11%	R	R	R	D	R	4
3	56.10%	55.81%	-0.29%	R	R	R	R	R	5
4	53.31%	53.76%	0.45%	R	R	R	R	R	5
5	53.74%	55.30%	1.56%	R	R	D	D	R	2
6	58.77%	58.49%	-0.28%	R	R	R	R	R	5
7	48.30%	44.42%	-3.78%	D	D	D	D	D	0
8	22.39%	21.22%	-1.17%	D	D	D	D	D	0
9	36.73%	35.67%	-1.06%	D	D	D	D	D	0
10	10.27%	16.52%	6.25%	D	D	D	D	D	0
11	11.91%	17.63%	5.72%	D	D	D	D	D	0
12	29.23%	24.92%	-4.31%	D	D	D	D	D	0
13	43.67%	55.57%	11.90%	D	D	D	D	D	0
14	59.06%	54.40%	-4.66%	R	R	R	R	R	5
15	48.21%	54.61%	6.40%	D	D	D	D	D	0
16	14.21%	13.02%	-1.19%	D	D	D	D	D	0
17	13.21%	22.95%	9.74%	D	D	D	D	D	0
18	15.28%	15.86%	0.58%	D	D	D	D	D	0
19	29.15%	26.71%	-2.44%	D	D	D	D	D	0
20	43.71%	41.73%	-1.98%	D	D	D	D	D	0
21	51.92%	52.85%	0.93%	R	R	R	R	R	5
22	39.05%	56.14%	17.09%	D	D	D	D	D	0
23	51.70%	61.82%	10.12%	R	R	R	R	R	5
24	67.29%	55.27%	-12.03%	R	R	R	R	R	5
25	52.79%	53.33%	0.54%	D	D	D	D	I	0
26	45.42%	54.99%	9.57%	D	D	D	D	R	1
27	59.20%	64.23%	5.03%	R	R	R	R	R	5
28	54.85%	54.94%	0.09%	R	R	D	D	R	3
29	51.32%	50.92%	-0.40%	D	R	R	R	R	4
30	53.29%	53.81%	0.52%	R	R	R	R	R	5
31	67.57%	59.08%	-8.49%	R	R	R	R	R	5
32	61.08%	62.14%	1.08%	R	R	R	R	R	5
33	72.24%	72.63%	0.39%	R	R	R	R	R	5
34	54.51%	53.00%	-1.51%	R	R	R	R	R	5
35	52.30%	52.43%	0.13%	R	R	R	R	R	5
36	53.06%	56.44%	3.38%	R	R	R	R	R	5
37	51.33%	55.61%	4.28%	R	R	D	D	D	2
38	65.80%	59.84%	-5.96%	R	R	R	R	R	5
39	60.35%	62.24%	1.89%	R	R	R	R	R	5
40	58.50%	55.95%	-2.55%	R	R	R	R	R	5
41	60.60%	56.99%	-3.61%	R	R	R	R	R	5
42	48.54%	42.99%	-5.55%	R	R	R	D	D	3
43	44.14%	44.59%	0.45%	R	R	D	D	R	3
44	36.74%	37.27%	0.53%	D	D	D	D	R	1
45	42.39%	53.84%	11.45%	D	D	D	D	R	1
46	42.07%	44.57%	2.50%	D	D	D	D	D	0
47	48.69%	39.36%	-9.33%	R	R	R	R	R	5
48	28.03%	27.24%	-0.79%	D	D	D	D	D	0
49	49.68%	49.93%	0.25%	R	R	D	D	R	3
50	52.08%	51.77%	-0.31%	R	R	R	R	R	5
51	44.01%	47.13%	3.12%	R	R	D	D	R	3
52	57.39%	57.88%	0.49%	R	R	R	R	R	5
53	83.74%	83.58%	0.84%	R	R	R	R	R	5
54	45.08%	45.28%	0.20%	R	R	D	D	D	2
55	49.34%	57.19%	7.85%	R	R	R	R	R	5
56	61.05%	54.12%	-6.93%	R	R	R	R	R	5
57	47.26%	46.45%	-0.81%	R	R	R	D	D	3
58	30.90%	30.79%	-0.11%	R	R	R	R	R	5
59	72.74%	61.52%	-11.22%	R	R	R	R	R	5
60	68.12%	71.32%	3.20%	R	R	R	R	R	5
61	35.98%	33.44%	-2.54%	D	D	D	D	R	0
62	44.35%	62.45%	18.10%	D	D	D	D	D	0
63	63.09%	56.78%	-6.31%	R	R	R	R	R	5
64	35.66%	42.16%	6.50%	D	D	D	D	R	0
65	45.44%	36.00%	-9.44%	D	D	D	D	D	0
66	59.12%	57.24%	-1.88%	R	R	R	R	R	5
67	51.72%	51.63%	-0.09%	R	R	R	I	R	4
68	45.01%	51.15%	6.14%	D	R	R	D	R	3
69	54.05%	53.57%	-0.49%	R	R	R	R	R	5
70	49.74%	50.00%	0.26%	D	D	D	D	D	0
71	41.68%	40.95%	-0.73%	D	D	D	D	D	0
72	48.03%	50.38%	1.35%	D	D	D	D	R	1
73	39.55%	40.05%	0.50%	D	D	D	D	D	0
74	43.78%	45.03%	1.25%	D	D	D	D	D	0
75	51.71%	52.31%	0.60%	D	D	D	D	R	1
76	24.29%	20.80%	-3.48%	D	D	D	D	D	0
77	23.88%	24.52%	0.64%	D	D	D	D	D	0
78	14.09%	17.18%	3.09%	D	D	D	D	D	0
79	37.49%	36.70%	-0.79%	D	D	D	D	D	0
80	42.15%	39.44%	-2.71%	R	R	R	R	D	4
81	36.16%	39.11%	2.95%	D	D	D	D	D	0
82	58.59%	55.72%	-2.87%	R	R	R	R	R	5
83	69.70%	70.25%	0.55%	R	R	R	R	R	5
84	64.99%	61.26%	-3.73%	R	R	R	R	R	5
85	48.91%	47.54%	-1.37%	D	D	D	D	D	0
86	54.56%	55.31%	0.75%	R	R	R	R	R	5
87	52.16%	53.42%	1.26%	R	R	R	R	R	5
88	44.85%	53.47%	8.62%	R	R	D	D	R	3
89	58.76%	58.58%	-0.18%	R	R	R	R	R	5
90	49.59%	40.13%	-9.46%	R	R	R	R	R	5
91	45.87%	44.45%	-1.42%	D	D	D	D	D	0
92	50.79%	53.85%	3.06%	R	R	R	D	D	3
93	44.73%	39.55%	-5.18%	R	R	D	D	R	3
94	51.57%	51.93%	0.36%	R	R	R	R	R	5
95	36.02%	36.26%	0.24%	D	D	D	D	D	0
96	45.32%	46.24%	0.92%	R	R	R	R	R	5
97	59.96%	62.39%	2.43%	R	R	R	R	R	5
98	70.96%	67.99%	-2.97%	R	R	R	R	R	5
99	73.35%	69.84%	-3.51%	R	R	R	R	R	5

Current Map		New Map	
Safe GOP (55%+)	27	Safe GOP (55%+)	34
Lean GOP (52.1-54.9%):	13	New Lean GOP (52.1-54.9%):	18
Total GOP Seats (safe + lean):	40	Total GOP Seats (safe + lean):	52
Swing (48-52%):	19	New Swing (48-52%)	9
Lean DEM (45.1-47.9%):	7	New Lean DEM (45.1-47.9%):	6
Safe DEM (-45%):	33	Safe DEM (-45%):	32
Total DEM Seats (safe + lean):	40	Total DEM Seats (safe + lean):	38

EXHIBIT 40 Gaddie

PENGAD 800-631-6989

Gaddie EXHIBIT NO. 72 1/20/12 RPTR PC For the Record, Inc. (608) 833-0392

Milwaukee_Gaddie_4_16_11_V1_B

DISTRICT	Current	New	Delta	2002	2004	2006	2008	2010	Cycles GOP
1	51.15%	51.22%	0.07%	R	R	R	R	R	5
2	54.93%	53.82%	-1.11%	R	R	R	D	R	4
3	56.10%	55.81%	-0.29%	R	R	R	R	R	5
4	53.31%	53.76%	0.45%	R	R	R	R	R	5
5	53.74%	55.30%	1.56%	R	D	D	D	R	2
6	59.77%	59.49%	-0.28%	R	R	R	R	R	5
7	48.20%	44.42%	-3.78%	D	D	D	D	D	0
8	22.39%	21.22%	-1.17%	D	D	D	D	D	0
9	36.73%	35.67%	-1.06%	D	D	D	D	D	0
10	10.27%	16.52%	6.25%	D	D	D	D	D	0
11	11.91%	17.63%	5.72%	D	D	D	D	D	0
12	29.23%	24.92%	-4.31%	D	D	D	D	D	0
13	43.67%	55.57%	11.90%	D	D	D	D	D	0
14	59.06%	54.40%	-4.66%	R	R	R	R	R	5
15	48.21%	54.61%	6.40%	D	D	D	D	D	0
16	14.21%	13.02%	-1.19%	D	D	D	D	D	0
17	13.21%	22.95%	9.74%	D	D	D	D	D	0
18	15.28%	15.86%	0.58%	D	D	D	D	D	0
19	29.15%	26.71%	-2.44%	D	D	D	D	D	0
20	43.71%	41.73%	-1.98%	D	D	D	D	D	0
21	51.92%	52.85%	0.93%	D	R	R	R	R	4
22	39.05%	56.14%	17.09%	D	D	D	D	D	0
23	51.70%	61.82%	10.12%	R	R	R	R	R	5
24	67.29%	55.27%	-12.02%	R	R	R	R	R	5
25	52.79%	53.33%	0.54%	D	D	D	D	I	0
26	45.42%	54.99%	9.57%	D	D	D	D	R	1
27	59.20%	64.23%	5.03%	R	R	R	R	R	5
28	54.85%	54.94%	0.09%	R	R	D	D	R	3
29	51.32%	50.92%	-0.40%	D	R	R	R	R	4
30	53.29%	53.81%	0.52%	R	R	R	R	R	5
31	67.57%	59.08%	-8.49%	R	R	R	R	R	5
32	61.06%	62.14%	1.08%	R	R	R	R	R	5
33	72.24%	72.63%	0.39%	R	R	R	R	R	5
34	54.51%	53.00%	-1.51%	R	R	R	R	R	5
35	52.30%	52.43%	0.13%	R	R	R	R	R	5
36	53.06%	56.44%	3.38%	R	R	R	R	R	5
37	51.33%	55.61%	4.28%	R	R	D	D	D	2
38	65.80%	59.84%	-5.96%	R	R	R	R	R	5
39	60.35%	62.24%	1.89%	R	R	R	R	R	5
40	58.50%	55.95%	-2.55%	R	R	R	R	R	5
41	60.60%	56.99%	-3.61%	R	R	R	R	R	5
42	48.54%	42.99%	-5.55%	R	R	R	D	D	3
43	44.14%	44.59%	0.45%	R	R	D	D	R	3
44	36.74%	37.27%	0.53%	D	D	D	D	R	1
45	42.39%	53.84%	11.45%	D	D	D	D	R	1
46	42.07%	44.57%	2.50%	D	D	D	D	D	0
47	48.69%	39.36%	-9.33%	R	R	R	R	R	5
48	28.03%	27.24%	-0.79%	D	D	D	D	D	0
49	49.68%	49.93%	0.25%	R	R	D	D	R	3
50	52.08%	51.77%	-0.31%	R	R	R	R	R	5
51	44.01%	47.13%	3.12%	R	R	D	D	R	3
52	57.39%	57.88%	0.49%	R	R	R	R	R	5
53	62.74%	63.58%	0.84%	R	R	R	R	R	5
54	45.08%	45.28%	0.20%	R	R	D	D	D	2
55	49.34%	57.19%	7.85%	R	R	R	R	R	5
56	61.05%	54.12%	-6.93%	R	R	R	R	R	5
57	47.26%	46.45%	-0.81%	R	R	R	D	D	3
58	70.90%	70.79%	-0.11%	R	R	R	R	R	5
59	72.74%	61.52%	-11.22%	R	R	R	R	R	5
60	68.12%	71.32%	3.20%	R	R	R	R	R	5
61	35.98%	33.44%	-2.54%	D	D	D	D	D	0
62	44.35%	62.45%	18.10%	D	D	D	D	D	0
63	63.09%	56.78%	-6.31%	R	R	R	R	R	5
64	35.66%	42.16%	6.50%	D	D	D	D	D	0
65	45.44%	36.00%	-9.44%	D	D	D	D	D	0
66	59.12%	57.24%	-1.88%	R	R	R	R	R	5
67	51.72%	51.63%	-0.09%	R	R	R	I	R	4
68	45.01%	51.15%	6.14%	D	R	R	D	R	3
69	54.06%	53.57%	-0.49%	R	R	R	R	R	5
70	49.74%	50.00%	0.26%	D	D	D	D	D	0
71	41.68%	40.95%	-0.73%	D	D	D	D	D	0
72	49.03%	50.38%	1.35%	D	D	D	D	R	1
73	39.55%	40.05%	0.50%	D	D	D	D	D	0
74	43.78%	45.03%	1.25%	D	D	D	D	D	0
75	51.71%	52.31%	0.60%	D	D	D	D	R	1
76	24.29%	20.80%	-3.49%	D	D	D	D	D	0
77	23.88%	24.52%	0.64%	D	D	D	D	D	0
78	14.09%	17.18%	3.09%	D	D	D	D	D	0
79	37.49%	36.70%	-0.79%	D	D	D	D	D	0
80	42.15%	39.44%	-2.71%	R	R	R	R	D	4
81	36.16%	39.11%	2.95%	D	D	D	D	D	0
82	58.59%	55.72%	-2.87%	R	R	R	R	R	5
83	69.70%	70.25%	0.55%	R	R	R	R	R	5
84	64.99%	61.26%	-3.73%	R	R	R	R	R	5
85	48.91%	47.54%	-1.37%	D	D	D	D	D	0
86	54.56%	55.31%	0.75%	R	R	R	R	R	5
87	52.16%	53.42%	1.26%	R	R	R	R	R	5
88	44.85%	53.47%	8.62%	R	R	D	D	R	3
89	55.76%	55.58%	-0.18%	R	R	R	R	R	5
90	49.59%	40.13%	-9.46%	R	R	R	R	R	5
91	45.87%	44.45%	-1.42%	D	D	D	D	D	0
92	50.79%	53.85%	3.06%	R	R	R	D	D	3
93	44.73%	39.55%	-5.18%	R	R	D	D	R	3
94	51.57%	51.93%	0.36%	R	R	R	R	R	5
95	36.02%	36.26%	0.24%	D	D	D	D	D	0
96	45.32%	46.24%	0.92%	R	R	R	R	R	5
97	59.96%	62.39%	2.43%	R	R	R	R	R	5
98	70.96%	67.99%	-2.97%	R	R	R	R	R	5
99	73.35%	69.84%	-3.51%	R	R	R	R	R	5

Current Map	
Safe GOP (55%+)	27
Lean GOP (52.1-54.9%):	13
Total GOP Seats (safe + lean):	40
Swing (48-52%):	19
Lean DEM (45.1-47.9%):	7
Safe DEM (-45%):	33
Total DEM Seats (safe + lean):	40

New Map	
Safe GOP (55%+)	34
New Lean GOP (52.1-54.9%):	18
Total GOP Seats (safe + lean):	52
New Swing (48-52%)	9
New Lean DEM (45.1-47.9%):	6
Safe DEM (-45%):	32
Total DEM Seats (safe + lean):	38

Gmail by Google

Adam Foltz <adamfoltz@gmail.com>

from prof gaddie

Joseph handrick <joeminocqua@msn.com> **Wed, Apr 20, 2011 at 7:34 AM**
To: adam foltz <adamfoltz@gmail.com>, tad ottman <tottman@gmail.com>

SEE Keith's comments below.

From: rkgaddie@ou.edu
To: joeminocqua@msn.com
Subject: RE: Milwaukee county elections
Date: Wed, 20 Apr 2011 03:47:20 +0000

Hey Joe-

I went ahead and ran the regression models for 2006, 2008, and 2010 to generate open seat estimates on all of the precincts. They expected GOP open seat assembly vote using the equations correlates at .96 with the 2004-2010 composite, and at a .93 level with the 2006-2010 state constitutional office composite. Both of them are running a little strong relative to one cluster of precincts -- I'll look and see if they are up north.

But, at this point, if you asked me, the power of the relationships indicates that the partisanship proxy you are using (all races) is an almost perfect proxy for the open seat vote, and the best proxy you'll come up with.

This seems to pretty much wraps up the partisanship measure debate.

Have Jim call me if he needs anything. Otherwise, I'll be tweaking the polarization analysis.

Best,
Keith

Ronald Keith Gaddie
Professor of Political Science
Editor, Social Science Quarterly
The University of Oklahoma
455 West Lindsey Street, Room 222
Norman, OK 73019-2001
Phone 405-325-4989
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http://faculty-staff.ou.edu/G/Ronald.K.Gaddie-1
http://socialsciencequarterly.org

EXHIBIT 42 Gaddie PENGAD 800-631-6989

From: joseph handrick [joeminocqua@msn.com]
Sent: Tuesday, April 19, 2011 9:33 PM
To: Gaddie, Ronald K.
Subject: RE: Milwaukee county elections

We looked at the different combos today.

Gaddie EXHIBIT NO. 67 4/20/12 RPTR PC For the Record, Inc. (608) 833-0392

The 2006 and 2010 races combined tilt too much to the GOP. I thought 06 and 10 would balance but they don't. The northern seats were especially out of whack.

So I had Tad do a composite with the 2006 and 2010 state races and all the federal races from 04 to 2010 (in other words, all statewide races from 04 to 2010). This seems to work well both in absolute terms as well as seats in relation to each other.

From: rkgaddie@ou.edu
To: joeminocqua@msn.com
Subject: RE: Milwaukee county elections
Date: Wed, 20 Apr 2011 02:18:46 +0000

Good. I am close to having a partisan baselining for you.

Ronald Keith Gaddie
Professor of Political Science
Editor, Social Science Quarterly
The University of Oklahoma
455 West Lindsey Street, Room 222
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Phone 405-325-4989
Fax 405-325-0718
E-mail: rkgaddie@ou.edu
http://faculty-staff.ou.edu/G/Ronald.K.Gaddie-1
http://socialsciencequarterly.org

Team Map

Assembly				Senate			
DISTRICT	Current	New	Delta	DISTRICT	Current	New	Delta
1	51.15%	51.22%	0.07%	1	54.04%	53.73%	-0.31%
2	54.93%	54.84%	-0.09%				
3	56.10%	55.58%	-0.52%				
4	53.31%	53.47%	0.16%	2	55.44%	55.23%	-0.21%
5	53.74%	54.28%	0.54%				
6	59.77%	58.33%	-1.44%				
7	48.20%	45.38%	-2.82%	3	40.52%	38.12%	-2.40%
8	22.39%	30.48%	8.09%				
9	36.73%	29.14%	-7.59%				
10	10.27%	12.59%	2.32%	4	17.58%	19.63%	2.05%
11	11.91%	19.58%	7.67%				
12	29.23%	27.51%	-1.72%				
13	43.67%	58.67%	15.00%	5	50.62%	57.72%	7.10%
14	59.06%	58.64%	-0.42%				
15	48.21%	55.48%	7.27%				
16	14.21%	10.54%	-3.67%	6	14.12%	15.55%	1.43%
17	13.21%	19.84%	6.63%				
18	15.28%	14.94%	-0.34%				
19	29.15%	28.03%	-1.12%	7	41.13%	40.53%	-0.60%
20	43.71%	43.12%	-0.59%				
21	51.92%	52.94%	1.02%				
22	39.05%	66.82%	27.77%	8	52.82%	60.88%	8.06%
23	51.70%	57.64%	5.94%				
24	67.29%	58.49%	-8.80%				
25	52.79%	53.26%	0.47%	9	52.96%	55.19%	2.23%
26	45.42%	55.97%	10.55%				
27	59.20%	56.19%	-3.01%				
28	54.85%	55.00%	0.15%	10	53.14%	53.32%	0.18%
29	51.32%	50.97%	-0.35%				
30	53.29%	53.78%	0.49%				
31	67.57%	56.33%	-11.24%	11	67.64%	60.13%	-7.51%
32	61.06%	62.28%	1.22%				
33	72.24%	61.81%	-10.43%				
34	54.51%	55.22%	0.71%	12	53.37%	54.39%	1.02%
35	52.30%	52.99%	0.69%				
36	53.06%	54.84%	1.78%				
37	51.33%	58.11%	6.78%	13	59.22%	60.17%	0.95%
38	65.80%	60.45%	-5.35%				
39	60.35%	62.00%	1.65%				
40	58.50%	58.07%	-0.43%	14	55.86%	56.02%	0.16%
41	60.60%	55.16%	-5.44%				
42	48.54%	54.94%	6.40%				
43	44.14%	43.06%	-1.08%	15	41.20%	40.17%	-1.03%
44	36.74%	37.22%	0.48%				
45	42.39%	40.08%	-2.31%				
46	42.07%	42.39%	0.32%	16	39.06%	34.13%	-4.93%
47	48.69%	33.36%	-15.33%				
48	28.03%	27.56%	-0.47%				
49	49.68%	49.59%	-0.09%	17	48.46%	49.23%	0.77%
50	52.08%	52.06%	-0.02%				
51	44.01%	46.23%	2.22%				
52	57.39%	59.06%	1.67%	18	54.96%	55.01%	0.05%
53	62.74%	61.85%	-0.89%				
54	45.08%	45.22%	0.14%				
55	49.34%	56.43%	7.09%	19	53.32%	53.02%	-0.30%
56	61.05%	57.59%	-3.46%				
57	47.26%	44.50%	-2.76%				
58	70.90%	70.54%	-0.36%	20	70.55%	69.46%	-1.09%
59	72.74%	68.31%	-4.43%				
60	68.12%	69.52%	1.40%				
61	35.98%	57.22%	21.24%	21	49.86%	57.77%	7.91%
62	44.35%	56.56%	12.21%				
63	63.09%	59.64%	-3.45%				
64	35.66%	42.72%	7.06%	22	47.56%	36.97%	-10.59%
65	45.44%	35.92%	-9.52%				
66	59.12%	31.71%	-27.41%				
67	51.72%	51.67%	-0.05%	23	49.98%	51.75%	1.77%
68	45.01%	49.38%	4.37%				
69	54.06%	54.16%	0.10%				
70	49.74%	50.73%	0.99%	24	46.72%	47.51%	0.79%
71	41.68%	40.72%	-0.96%				
72	49.03%	51.49%	2.46%				
73	39.55%	40.16%	0.61%	25	44.88%	44.88%	0.00%
74	43.78%	42.89%	-0.89%				
75	51.71%	52.18%	0.47%				
76	24.29%	14.49%	-9.80%	26	20.85%	20.98%	0.13%
77	23.88%	18.90%	-4.98%				
78	14.09%	31.38%	17.29%				
79	37.49%	41.77%	4.28%	27	38.38%	41.48%	3.10%
80	42.15%	38.55%	-3.60%				
81	36.16%	44.56%	8.40%				
82	58.59%	57.08%	-1.51%	28	64.48%	60.93%	-3.55%
83	69.70%	68.31%	-1.39%				
84	64.99%	57.10%	-7.89%				
85	48.91%	48.38%	-0.53%	29	52.00%	52.47%	0.47%
86	54.56%	55.08%	0.52%				
87	52.16%	53.74%	1.58%				
88	44.85%	53.19%	8.34%	30	50.38%	50.55%	0.17%
89	55.76%	55.73%	-0.03%				
90	49.59%	40.40%	-9.19%				
91	45.87%	39.57%	-6.30%	31	46.89%	44.94%	-1.95%
92	50.79%	44.30%	-6.49%				
93	44.73%	51.10%	6.37%				
94	51.57%	51.91%	0.34%	32	44.43%	44.63%	0.20%
95	36.02%	36.36%	0.34%				
96	45.32%	46.40%	1.08%				
97	59.96%	62.91%	2.95%	33	68.84%	68.60%	-0.24%
98	70.96%	74.85%	3.89%				
99	73.35%	67.02%	-6.33%				

Current Map	Assembly	Senate
Strong GOP (55%+)	27	7
Lean GOP (52-54.9%):	13	8
Total GOP Seats (safe + lean):	40	15
Swing (48-52%):	19	5
Lean DEM (45.1-47.9%):	7	3
Safe DEM (-45%):	33	10
Total DEM Seats (safe + lean):	40	13

New Map	Assembly	Senate
Strong GOP (55%+)	38	12
New Lean GOP (52-54.9%):	14	5
Total GOP Seats (safe + lean):	52	17
New Swing (48-52%)	10	3
New Lean DEM (45.1-47.9%):	4	1
Safe DEM (-45%):	33	12
Total DEM Seats (safe + lean):	37	13

Team Map - Ranking

	Assembly				Senate			
	DISTRICT	Current	New	Delta	DISTRICT	Current	New	Delta
1	93	70.96%	74.83%	3.87%	31	68.84%	68.56%	-0.28%
2	58	70.90%	70.55%	-0.35%	20	70.55%	68.46%	-2.09%
3	24	67.29%	69.52%	2.23%	8	52.82%	61.64%	8.82%
4	83	69.70%	68.35%	-1.35%	28	64.48%	60.90%	-3.58%
5	59	72.74%	68.26%	-4.48%	13	59.22%	60.34%	1.12%
6	99	73.35%	66.88%	-6.47%	11	67.64%	60.14%	-7.50%
7	60	68.12%	66.82%	-1.30%	5	50.62%	57.79%	7.17%
8	97	59.96%	63.05%	3.09%	21	49.86%	57.77%	7.91%
9	32	61.06%	62.06%	1.00%	14	55.86%	55.96%	0.10%
10	39	60.35%	62.00%	1.65%	2	55.44%	55.23%	-0.21%
11	33	72.24%	61.92%	-10.32%	9	52.96%	55.19%	2.23%
12	53	62.74%	61.81%	-0.93%	18	54.96%	55.01%	0.05%
13	37	51.33%	60.58%	9.25%	12	53.37%	54.43%	1.06%
14	63	63.09%	59.64%	-3.45%	1	54.04%	53.73%	-0.31%
15	52	57.39%	59.06%	1.67%	10	53.14%	53.31%	0.17%
16	14	59.06%	58.76%	-0.30%	19	53.32%	53.02%	-0.30%
17	13	43.67%	58.68%	15.01%	29	52.00%	52.52%	0.52%
18	23	51.70%	58.51%	6.81%	23	49.98%	51.69%	1.71%
19	38	65.80%	58.46%	-7.34%	30	50.38%	50.55%	0.17%
20	6	59.77%	58.33%	-1.44%	17	48.46%	49.23%	0.77%
21	22	39.05%	57.63%	18.58%	24	46.72%	47.39%	0.67%
22	56	61.05%	57.55%	-3.50%	31	46.89%	44.93%	-1.96%
23	40	58.50%	57.51%	-0.99%	25	44.88%	44.84%	-0.04%
24	61	35.98%	57.23%	21.25%	32	44.43%	44.63%	0.20%
25	82	58.59%	57.13%	-1.46%	27	38.38%	40.98%	2.60%
26	84	64.99%	56.94%	-8.05%	7	41.13%	40.53%	-0.60%
27	62	44.35%	56.56%	12.21%	15	41.20%	39.51%	-1.69%
28	55	49.34%	56.43%	7.09%	3	40.52%	38.12%	-2.40%
29	31	67.57%	56.41%	-11.16%	22	47.56%	36.97%	-10.59%
30	27	59.20%	56.13%	-3.07%	16	39.06%	35.24%	-3.82%
31	26	45.42%	56.03%	10.61%	26	20.85%	20.98%	0.13%
32	41	60.60%	55.79%	-4.81%	4	17.58%	19.63%	2.05%
33	89	55.76%	55.73%	-0.03%	6	14.12%	15.57%	1.45%
34	3	56.10%	55.58%	-0.52%				
35	15	48.21%	55.52%	7.31%				
36	34	54.51%	55.22%	0.71%				
37	86	54.56%	55.11%	0.55%				
38	28	54.85%	54.99%	0.14%				
39	2	54.93%	54.84%	-0.09%				
40	36	53.06%	54.84%	1.78%				
41	42	48.54%	54.63%	6.09%				
42	5	53.74%	54.28%	0.54%				
43	87	52.16%	53.92%	1.76%				
44	69	54.06%	53.85%	-0.21%				
45	30	53.29%	53.80%	0.51%				
46	4	53.31%	53.47%	0.16%				
47	25	52.79%	53.27%	0.48%				
48	88	44.85%	53.19%	8.34%				
49	35	52.30%	53.08%	0.78%				
50	21	51.92%	52.94%	1.02%				
51	75	51.71%	52.14%	0.43%				
52	94	51.57%	51.91%	0.34%				
53	50	52.08%	51.87%	-0.21%				
54	67	51.72%	51.67%	-0.05%				
55	1	51.15%	51.22%	0.07%				
56	93	44.73%	51.15%	6.42%				
57	29	51.32%	50.94%	-0.38%				
58	72	49.03%	50.42%	1.39%				
59	70	49.74%	50.17%	0.43%				
60	49	49.68%	49.75%	0.07%				
61	68	45.01%	49.66%	4.65%				
62	85	48.91%	48.31%	-0.60%				
63	96	45.32%	46.40%	1.08%				
64	51	44.01%	46.28%	2.27%				
65	7	48.20%	45.35%	-2.85%				
66	54	45.08%	45.26%	0.18%				
67	46	42.07%	45.19%	3.12%				
68	81	36.16%	44.56%	8.40%				
69	57	47.26%	44.49%	-2.77%				
70	92	50.79%	44.30%	-6.49%				
71	20	43.71%	43.06%	-0.65%				
72	64	35.66%	42.72%	7.06%				
73	74	43.78%	42.43%	-1.35%				
74	43	44.14%	41.96%	-2.18%				
75	71	41.68%	41.92%	0.24%				
76	73	39.55%	40.52%	0.97%				
77	90	49.59%	40.40%	-9.19%				
78	79	37.49%	40.09%	2.60%				
79	91	45.87%	39.53%	-6.34%				
80	80	42.15%	38.65%	-3.50%				
81	45	42.39%	38.18%	-4.21%				
82	44	36.74%	38.07%	1.33%				
83	95	36.02%	36.36%	0.34%				
84	65	45.44%	35.92%	-9.52%				
85	47	48.69%	34.47%	-14.22%				
86	66	59.12%	31.71%	-27.41%				
87	78	14.09%	30.86%	16.77%				
88	8	22.39%	30.48%	8.09%				
89	9	36.73%	29.14%	-7.59%				
90	19	29.15%	28.03%	-1.12%				
91	12	29.23%	27.51%	-1.72%				
92	48	28.03%	27.45%	-0.58%				
93	17	13.21%	19.88%	6.67%				
94	11	11.91%	19.58%	7.67%				
95	77	23.88%	19.23%	-4.65%				
96	18	15.28%	14.94%	-0.34%				
97	76	24.29%	14.46%	-9.83%				
98	10	10.27%	12.59%	2.32%				
99	16	14.21%	10.54%	-3.67%				

Current Map	Assembly	Senate
Strong GOP (55%+)	27	7
Lean GOP (52.1-54.9%):	13	8
Total GOP Seats (safe + lean):	40	15
Swing (48-52%):	19	5
Lean DEM (45.1-47.9%):	7	3
Safe DEM (-45%):	33	10
Total DEM Seats (safe + lean):	40	13

New Map	Assembly	Senate
Strong GOP (55%+)	37	12
New Lean GOP (52.1-54.9%):	14	5
Total GOP Seats (safe + lean):	51	17
New Swing (48-52%)	11	3
New Lean DEM (45.1-47.9%):	5	1
Safe DEM (-45%):	32	12
Total DEM Seats (safe + lean):	37	13

Team Map

Assembly				Senate			
DISTRICT	Current	New	Delta	DISTRICT	Current	New	Delta
1	51.15%	51.22%	0.07%	1	54.04%	53.73%	-0.31%
2	54.93%	54.84%	-0.09%				
3	56.10%	55.58%	-0.52%				
4	53.31%	53.47%	0.16%	2	55.44%	55.23%	-0.21%
5	53.74%	54.28%	0.54%				
6	59.77%	58.33%	-1.44%				
7	48.20%	45.38%	-2.82%	3	40.52%	38.12%	-2.40%
8	22.39%	30.48%	8.09%				
9	36.73%	29.14%	-7.59%				
10	10.27%	12.59%	2.32%	4	17.58%	19.63%	2.05%
11	11.91%	19.58%	7.67%				
12	29.23%	27.51%	-1.72%				
13	43.67%	58.67%	15.00%	5	50.62%	57.72%	7.10%
14	59.06%	58.64%	-0.42%				
15	48.21%	55.48%	7.27%				
16	14.21%	10.54%	-3.67%	6	14.12%	15.55%	1.43%
17	13.21%	19.84%	6.63%				
18	15.28%	14.94%	-0.34%				
19	29.15%	28.03%	-1.12%	7	41.13%	40.53%	-0.60%
20	43.71%	43.12%	-0.59%				
21	51.92%	52.94%	1.02%				
22	39.05%	57.64%	18.59%	8	52.82%	60.88%	8.06%
23	51.70%	58.49%	6.79%				
24	67.29%	66.82%	-0.47%				
25	52.79%	53.26%	0.47%	9	52.96%	55.19%	2.23%
26	45.42%	55.97%	10.55%				
27	59.20%	56.19%	-3.01%				
28	54.85%	55.00%	0.15%	10	53.14%	53.32%	0.18%
29	51.32%	50.97%	-0.35%				
30	53.29%	53.78%	0.49%				
31	67.57%	56.41%	-11.16%	11	67.64%	60.14%	-7.50%
32	61.06%	62.07%	1.01%				
33	72.24%	61.92%	-10.32%				
34	54.51%	55.22%	0.71%	12	53.37%	54.39%	1.02%
35	52.30%	52.99%	0.69%				
36	53.06%	54.84%	1.78%				
37	51.33%	58.11%	6.78%	13	59.22%	60.17%	0.95%
38	65.80%	60.45%	-5.35%				
39	60.35%	62.00%	1.65%				
40	58.50%	58.07%	-0.43%	14	55.86%	56.02%	0.16%
41	60.60%	55.16%	-5.44%				
42	48.54%	54.94%	6.40%				
43	44.14%	41.82%	-2.32%	15	41.20%	39.37%	-1.83%
44	36.74%	38.06%	1.32%				
45	42.39%	37.89%	-4.50%				
46	42.07%	44.95%	2.88%	16	39.06%	34.74%	-4.32%
47	48.69%	32.92%	-15.77%				
48	28.03%	27.56%	-0.47%				
49	49.68%	49.59%	-0.09%	17	48.46%	49.23%	0.77%
50	52.08%	52.06%	-0.02%				
51	44.01%	46.23%	2.22%				
52	57.39%	59.06%	1.67%	18	54.96%	55.01%	0.05%
53	62.74%	61.85%	-0.89%				
54	45.08%	45.22%	0.14%				
55	49.34%	56.43%	7.09%	19	53.32%	53.02%	-0.30%
56	61.05%	57.59%	-3.46%				
57	47.26%	44.50%	-2.76%				
58	70.90%	70.54%	-0.36%	20	70.55%	69.46%	-1.09%
59	72.74%	68.31%	-4.43%				
60	68.12%	69.52%	1.40%				
61	35.98%	57.22%	21.24%	21	49.86%	57.77%	7.91%
62	44.35%	56.56%	12.21%				
63	63.09%	59.64%	-3.45%				
64	35.66%	42.72%	7.06%	22	47.56%	36.97%	-10.59%
65	45.44%	35.92%	-9.52%				
66	59.12%	31.71%	-27.41%				
67	51.72%	51.67%	-0.05%	23	49.98%	51.75%	1.77%
68	45.01%	49.38%	4.37%				
69	54.06%	54.16%	0.10%				
70	49.74%	50.73%	0.99%	24	46.72%	47.51%	0.79%
71	41.68%	40.72%	-0.96%				
72	49.03%	51.49%	2.46%				
73	39.55%	40.16%	0.61%	25	44.88%	44.88%	0.00%
74	43.78%	42.89%	-0.89%				
75	51.71%	52.18%	0.47%				
76	24.29%	14.48%	-9.81%	26	20.85%	20.98%	0.13%
77	23.88%	18.90%	-4.98%				
78	14.09%	31.38%	17.29%				
79	37.49%	40.62%	3.13%	27	38.38%	41.56%	3.18%
80	42.15%	39.90%	-2.25%				
81	36.16%	44.56%	8.40%				
82	58.59%	57.08%	-1.51%	28	64.48%	60.95%	-3.53%
83	69.70%	68.32%	-1.38%				
84	64.99%	57.10%	-7.89%				
85	48.91%	48.38%	-0.53%	29	52.00%	52.47%	0.47%
86	54.56%	55.08%	0.52%				
87	52.16%	53.74%	1.58%				
88	44.85%	53.19%	8.34%	30	50.38%	50.55%	0.17%
89	55.76%	55.73%	-0.03%				
90	49.59%	40.40%	-9.19%				
91	45.87%	39.57%	-6.30%	31	46.89%	44.94%	-1.95%
92	50.79%	44.30%	-6.49%				
93	44.73%	51.10%	6.37%				
94	51.57%	51.91%	0.34%	32	44.43%	44.63%	0.20%
95	36.02%	36.36%	0.34%				
96	45.32%	46.40%	1.08%				
97	59.96%	62.92%	2.96%	33	68.84%	68.60%	-0.24%
98	70.96%	74.85%	3.89%				
99	73.35%	67.02%	-6.33%				

Current Map	Assembly	Senate
Strong GOP (55%+)	27	7
Lean GOP (52-54.9%):	13	8
Total GOP Seats (safe + lean):	40	15
Swing (48-52%):	19	5
Lean DEM (45.1-47.9%):	7	3
Safe DEM (-45%):	33	10
Total DEM Seats (safe + lean):	40	13

New Map	Assembly	Senate
Strong GOP (55%+)	38	12
New Lean GOP (52-54.9%):	14	5
Total GOP Seats (safe + lean):	52	17
New Swing (48-52%)	10	3
New Lean DEM (45.1-47.9%):	4	1
Safe DEM (-45%):	33	12
Total DEM Seats (safe + lean):	37	13